

Study programme: MAS Geography			
Course title: Applied Climatology			
Teacher: dr Stevan M. Savić			
Status: elective			
ECTS: 6			
Requirements: none			
Learning objectives			
Students will get information about the possibilities of using the energy of various meteorological parameters and climatological processes in the atmosphere and above the ground (solar energy, energy of wind, patterns of rainfall and snow melting as essential factors of hydropower potential). Students will gain knowledge about state-of-the-art technologies on using various sources of energy from atmospheric processes. Students will learn the positive and negative impacts of various climate events on economies and societies.			
Learning outcomes			
Students should be able to use energy sources from climatology or meteorology parameters or processes. They should learn if these sources are profitable enough as well as the general advantages and disadvantages of using these sources. Students will learn the possibilities of adaptation on eventually negative climate processes, which can affect the society and economy. In addition, students will find out opportunities to use the climatology processes in order to provide better quality of life and better environmental protection.			
Syllabus			
<i>Theoretical part:</i>			
Solar energy – global examples and current situation in Serbia;			
Wind energy – examples of using this power in the World and possibilities of using wind energy in Serbia;			
Hydropower – connection of rainfall patterns and seasonality of snow and ice melting with hydropower (global examples and situation in Serbia);			
<i>Practical part</i> Using the instruments which are used in monitoring various meteorological parameters (automatic weather stations, different analogue and digital instruments);			
Literature:			
1. Shelton, M.L. 2009. Hydroclimatology – Perspectives and Applications. Cambridge University Press, 438 pp.			
2. Sivakumar, M.V.K., Hansen, J. 2007. Climate Prediction and Agriculture: Advances and Challenges, Springer, 306 pp.			
3. Becken, S., Hay, J. 2007. Tourism and Climate Change: Risks and Opportunities (Climate Change, Economies and Society), Channel View Publications, 352 pp.			
4. Ruddiman, W.F. 2005. Plows, Plagues, and Petroleum: How Humans Took Control of Climate, Princeton University Press, 272 pp.			
5. van Dam, J.C. 2003. Impacts of Climate Change and Climate Variability on Hydrological Regimes (International Hydrology) (International Hydrology Series), Cambridge University Press, 160 pp.			
6. Mačejka, M. 2003. Klima i njen zdravstveni značaj u banjam Srbije. Srpsko geografsko društvo, Beograd: 1-375.			
7. Penzar, I., Penzar, B. 2000. Agrometeorologija. Školska knjiga, Zagreb: 1-228.			
8. Ocokoljić, M. 1994. Cikličnost sušnih i vodnih perioda u Srbiji. SANU, Geografski institutu "Jovan Cvijić", knjiga 41, Beograd: 1-110.			
Weekly teaching load 4 (60)		Lectures 2	Exercises 2
Methods of Teaching			
Lecture method, Demonstration method, Practical exercise			
Grading method (maximum 100 points)			
Pre-examination assignments	points	Final examination	points
Activities during lectures	0-5	Written examination	
Activities during exercises	0-5	Oral examination	30-45
Colloquia	20-40		
Seminar paper	0-5		