

<b>Study program: Master academic studies Environmental Economics and Climate Change (MASECC)</b>			
<b>Type and level of studies: Master academic studies, II level</b>			
<b>Subject name: Analysis and Interpretation of Climate Data</b>		<b>Subject code</b>	6M1AIK
<b>Professor: <a href="#">dr Dragoslav Budimirović, assistant professor</a></b>			
<b>Subject status:</b> Elective			
<b>Number of ECTS: 6</b>			
<b>Condition:</b> None			
<b>Subject goal</b> During this course, students will have the opportunity to become more familiar with the climatic parameters, in the first place with the air and soil temperature, rainfall and evapotranspiration, the types of instruments and modes of monitoring parameters. The emphasis of the subject is on the analysis of observed data around the room (spot and regional), then in time as well as their table and graphical display. Also, students will master the basic knowledge of statistics, probability, correlation and regression, which is applied and used in modern climatology.			
<b>Subject outcome</b> Students are trained to independently perform data processing of the climatic parameters (in the point, space, time, statistical and correlation analysis, ...), they will also master the basic knowledge that will allow them autonomy in establishing dependencies between climatic parameters as the independent and dependent sizes (altitude, water levels, river flows, groundwater levels...).			
<b>Subject content</b> <i>Theoretical classes</i> Climate parameters, climate change and their importance; Air temperature - air temperature measurement, processing of the obtained data, spatial analysis of the air temperature, the time analysis. air, impact of altitude on temperature, trends of the air temperature according to expected climate changes; The soil temperature – measurements and observation, the spatial and temporal analysis; Precipitation - types and kinds of precipitation, observation of precipitations, the processing of data in the point, spatial analysis of precipitation, precipitation time analysis, trends of precipitation; Evapotranspiration - measurements, observations, empirical equations for calculation of evapotranspiration, climate change and their impact on evapotranspiration; Application of the statistics and probability in climatology - introduction, random variables, the statistical parameters, the empirical distributions, functions of the distribution of the breaking random variable (Binomial and Poisson), distribution function of the continuous random variables - standard, Log Normal, Gumbel, Pierson III and Log Pearson III distribution, principles of statistical inference, confidence intervals, testing the adjustments of the empirical and theoretical distribution function, Correlation analysis in climatology, Regression dependent variables-the establishment of linear and nonlinear dependence with one or more independent variables; Practical examples of statistical analysis and regression dependence. <i>Practical classes</i> Practices will be adapted to lectures, they are designed to be short, clear, simple and adapted to who attend accredited study program. There is a planned one/day visit to Republic Hydrometeorological Institute of Serbia.			
<b>Literature</b> 1. Vesna Ristić Vakanjac: Skripta vezana za akreditovani program 2. Vesna Ristić Vakanjac: Praktikum vezan za akreditovani program 3. Vesna Ristić Vakanjac, Stevan Prohaska, Marina Čokorilo Ilić (2016): Zbirka rešenih zadataka (u štampi)			
<b>Number of active teaching classes</b>			Other classes
Lectures: 2(30)	Practices: 2(30)	Other class forms:	Study research paper:
<b>Teaching methods</b> Interactive lectures through presentations, practical training in the form of audio-visual practices. Simulation workshops and discussions on given topics, consultations, colloquium, seminar, written + oral exam.			
<b>Knowledge evaluation (maximum number of points is 100)</b>			
<b>Pre-exam obligations</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Activity during lectures	10	Written exam	30
Practical classes	20	Oral exam	20
Colloquium	10		
Seminar paper	10		