

Name of the subject: Urban climate and sustainable cities		
Teacher(s): Dragan D. Milošević , Stevan M. Savić		
Status of the subject: elective		
Number of ECTS points: 15		
Condition: -		
Goal of the subject Improving knowledge about the processes, causes and consequences of climate change and weather conditions in the urban environment.		
Outcome of the subject Doctoral students will master the knowledge from the multidisciplinary scientific field of urban climate, urbanization and sustainable development. They will expand their knowledge of climate conditions at the micro and local levels.		
Content of the subject <i>Theoretical classes</i> Urban climate; Local climate zones; Mobile microclimatic measurements and urban networks of meteorological sensors; Use of satellites and drones in urban climate analysis; Microclimatic models, outdoor human thermal comfort and health; Bioclimatic questionnaire; Sustainable development and climate-conscious urban design and planning; Green infrastructure in cities; Blue infrastructure in cities. <i>Practical classes:</i> Measurement of microclimatic conditions in the cities of Serbia (air temperature, humidity, wind, solar radiation), as well as the use of the bioclimatic questionnaire among the urban population. Data processing in statistical software. Calculation of thermal comfort index and modeling of urban design elements (e.g. trees, buildings) in microclimate software in order to select the best urban solution for creating comfortable and climatically pleasant parts of the city. Preparation and guidance of students through the development of a scientific project (project application, professional work, scientific work).		
Recommended literature 1. Dragan D. Milošević (2018). „Application and evaluation of classification system of Local climate zones using automatic model and bioclimate analysis“, DGTH, UNS – PhD thesis (not applicable for foreign students) 2. Oke, T. R., Mills, G., Christen, A., & Voogt, J. A. (2017). <i>Urban climates</i> . Cambridge University Press. 3. European Commission (2015). <i>Nature-Based Solutions & Re-Naturing Cities</i> .		
Number of active classes	Theory: 5(75)	Practice: 5(75)
Methods of delivering lectures Oral lectures, individual consultations, seminar papers, field work		
Evaluation of knowledge (maximum number of points 100) Project presentation: 50 Oral exam: 50		