

1.	Course name: Bats in urban settings
2.	University department: Department of Behavioural Ecology, Faculty of Biological Sciences
3.	Course type: field course
4.	Degree: bachelor
5.	Semester: winter
6.	Number of hours: 15 h
7.	Name, Surname, academic title: Iwona Gottfried, PhD (iwona.gottfried@uwr.edu.pl)
8.	<p>Course description/Content:</p> <p>Course objectives: To acquire knowledge of methods of bat inventory in buildings and green areas in cities. To develop skills in recognizing selected bat species and threats in the urban settings.</p> <p>Curriculum content:</p> <ul style="list-style-type: none"> - recognizing selected bat species on the basis of external features, - identifying bat roosts on the basis of signs of existence and vocalizations, - knowledge of voices of selected Polish bat species occurring in the city area - methods of carrying out bat inventory in urban areas, - identification of threats to bats in city area (renovation of buildings, maintenance of urban greenery, artificial lighting at night), - actions minimize threats to bats and compensating for habitat loss in urban settings.
9.	<p>Recommended literature:</p> <p>Gottfried I., Gottfried T., Zając K. 2019. Bats use larval galleries of the endangered beetle <i>Cerambyx cerdo</i> as hibernation sites. <i>Mammalian Biology</i>, 95: 31-34. DOI: 10.1016/j.mambio.2019.01.002</p> <p>Marnell, F. & P. Presetnik (2010): Protection of overground roosts for bats (particularly roosts in buildings of cultural heritage importance). EUROBATS Publication Series No. 4 (English version). UNEP / EUROBATS Secretariat, Bonn, Germany, 57 pp. https://www.eurobats.org/sites/default/files/documents/publications/publication_series/EUROBATS_PubISer_No4_English_3rd_edition.pdf</p> <p>Voigt, C. C., Azam, C., Dekker, J., Ferguson, J., Fritze, M., Gazaryan, S., Hölker, F., Jones, G., Leader, N., Lewanzik, D. Limpens, H. J. G. A. (2018). Guidelines for consideration of bats in lighting projects. EUROBATS Publication Series No. 8. EUROBATS Secretariat, UN Environment, Bonn. https://eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf.</p> <p>Voigt Ch.C., Kendra L. Phelps K.L., Aguirre L.F., Schoeman M.C., Vanitharani J., Zubaid A. 2016. Bats in the Anthropocene: Conservation of Bats in a Changing World: 427-462. https://link.springer.com/chapter/10.1007/978-3-319-25220-9_14</p> <p>https://www.batcon.org/about-bats/bat-houses/ https://cdn.bats.org.uk/uploads/pdf/Bats-Trees.pdf?v=1541085197</p>
10	Form of credit:

	<p>Field course:</p> <ul style="list-style-type: none"> - continuous assessment of the student's own work in class, - preparation for classes, reading the indicated literature: 3 h - In groups: preparing the methodology and making an inventory during classes, - preparing a guide or an educational leaflet/board concerning on one of the issues analysed during the classes: 7 h; a pass: minimum 50% + 1 of total available points.
11	Language: English
12	Number of ECTS: 1