



Module syllabus: *Human impact on the Białowieża Forest*

1. Overall information

Module coordinator	dr hab. Anna Orczewska
Contact	anna.orczewska@us.edu.pl; +48 32 359 1548
ECTS	4
Method for the verification of learning outcomes	<p>The final grade for the module is weighted on the average of the following student's activities:</p> <ul style="list-style-type: none">- Active participation in the field course (0.5)- Written final report (0.5) <p>To be awarded a final grade, the student must have passed each activity of the module.</p> <p>Grades: below 51% – fail (F); 52-60% – with minimum academic criteria (E); 61-65% – satisfactory (D); 66-75% – good (C); 76-85% – very good (B), ≥ 85% – excellent (A)</p>

2. Description of student activity and work

Field visit/discussion sessions	
Responsible instructor	dr hab. Anna Orczewska, PhD (Department of Ecology), and dr Karolina Bierza, PhD, (optionally, in a case in which there are many participants)
Content	<p>The main objective of this module is to offer students the chance to observe the main natural biological processes of forest dynamics and to become familiar with the scientific role of the Białowieża Forest, a UNESCO World Heritage Site and the best preserved lowland forest complex remaining in Europe. Participants will have a unique opportunity to visit the Białowieża National Park and the managed part of the Białowieża forest complex. During this field trip, they will have a chance to see the sites recently affected by a bark beetle outbreak, one of the natural biotic disturbances that are present in the forests of temperate zone. This will help them to develop their skills for critically assessing forest management practices including sanitary logging and their impact on biodiversity and forest dynamics.</p> <p>Five-day field trip to Białowieża</p> <p>First day – travelling to Białowieża – during the journey, the following topics will be presented: general information about the Białowieża Forest, a UNESCO WHS; its natural, environmental history, the history of human impact, its biodiversity and the factors that shaped it, current environmental problems and social conflicts. Finally, the role of the Białowieża Forest in biological and forestry science will be discussed.</p> <p>Second day – visit to a museum followed by a full-day trip to the Białowieża National Park.</p> <p>Third day – meeting with scientists from the different institutes located in Białowieża and presentation of their scientific studies conducted within the BF. Optional, afternoon visit to an alderwood forest (a walk through the “Bison rips” tourist trail) and to a local zoo that has an exhibition of the animals that naturally occur in the BF.</p>





	<p>Fourth day – walks in the managed part of the Białowieża Forest; presentation of selected forest types, a visit to the sites affected by the bark beetle (forests and post-felling sites); presentation of examples of the management practices whose aims are to deal with the outbreak, including clearcuts. Evening discussions on the differences observed between strictly protected forests with those that are actively managed by foresters, on the role of strict protection/forest management on the structure, dynamics and biotic diversity of forests. Self-study: preparing a written report from the topics observed and discussed during the field work.</p> <p>Fifth day – journey back to Katowice</p>
Methodology of laboratory classes	Developing the students' skills for observing the different phenomena that are present in a natural, wild forest, their understanding of the importance of a diverse forest structure on its biodiversity including the role of deadwood and the role of intact forests (undisturbed by human intervention) on the course of ecological processes. Critical analysis of the differences between strictly protected and intensively managed forests, especially of the role of silvicultural management practices on forest dynamics.
Number of didactic hours (contact hours)	30
Literature	<p>Selected scientific papers dealing with the natural values of the BF, the role of deadwood and strict protection on the biology and ecology of species, the role of the bark beetle (a keynote species) and other types of natural disturbances on forest dynamics (literature provided by an instructor as well as those found by students on the internet)</p> <p>Dispute over the future of the Białowieża Forest: myths and facts. A voice in the debate. www.forestbiology.org</p>

3. Forms of verification

Continuous evaluation of knowledge, activity and practical skills	
Grades	<p>Grades are awarded on a scale of A-F, where A is the best and F is a fail.</p> <p><u>An excellent performance (A)</u> – the student actively participates in the field course, is very observant and demonstrates an excellent understanding of the phenomena presented in the field, is engaged and creative in the discussions, which is reflected in the quality of their final report.</p> <p><u>A good performance (C)</u> – the student demonstrates good judgment and knowledge, correctly undertakes all of the tasks, correctly exhibits a sense of the presented phenomena and is involved in the discussions. Provides a report with minor mistakes/important conclusions missed.</p> <p><u>A satisfactory performance (E)</u> – the student demonstrates satisfactory judgment and knowledge, is poorly engaged and needs additional encouragement to participate in the discussions and to interpret the observed patterns of vegetation correctly; delivers a report with many mistakes and conclusions missed.</p> <p><u>A performance that does not meet the minimum academic criteria (F)</u> – the student is not engaged in the tasks, does not exhibit a proper understanding of the phenomena and processes in the field; does not deliver a written report.</p>





Reports from realised laboratory projects	
Evaluation	<p>Evaluation comprise judgment and basic knowledge related to the patterns and processes observed in nature, engagement in the discussions and preparation of a report from the field visit, which is based both on the experience gained during the trip and the knowledge obtained from the selected scientific literature provided by an instructor.</p> <p>Grades for reports are awarded on a scale: A-F, where A is the best and F is a fail.</p> <p>An excellent report (A) – without any essential errors</p> <p>Fail (F) – no report</p>

