

<b>Subject name</b>	Applied forest site diagnosis	
<b>Subject code</b>		
<b>Department</b>	Department of Forest Soil, Institute of Ecology and Silviculture	
<b>Faculty</b>	Faculty of Forestry	
<b>Subject supervisor/Lecturer</b>	Ewa Błońska, Ph.D. <a href="mailto:eblonska@ar.krakow.pl">eblonska@ar.krakow.pl</a> Phone: +48 126625031; <a href="#">Strona pracownicy UR</a> ; <a href="#">Google Scholar</a> ;	
<b>General information</b>	Teaching period	summer semester
	ECTS credit	3
	Lectures total	24 hours
	Classes	8 hours
	Field training	18 hours
<b>Objective and general description</b>	The aim of the course is to teach the students evaluation of soils and their sites creation functions. On small forest area the student learn the variability of geological conditions, geomorphological and soil conditions affecting the life of the trees. Combination of laboratory and field classes and lectures allow students to learn all the elements included in distinguishing, diagnosis and mapping of sites in forests	
<b>Lectures</b> <b>5 × 2 hours</b>	<ol style="list-style-type: none"> <li>1. The basics of cartography lowland and mountain forest area. The principles distinguish and mapping of forest sites. The elements of sites mapping in the forests under the impact of the industry.</li> <li>2. Soil causes of sites variability in the forests little changed by human activity and forests under the influence of the industry.</li> <li>3. Climate causes of forest sites variability at the macro level (from the equator to the pole) and micro (in one lowland and mountain forest district).</li> <li>4. Climate change, its impact on forest sites and their consistency in future species compositions stands - forecast climatologist.</li> <li>5. Climate models in forest management. Forest adaptation to changing climatic conditions.</li> <li>6. Soil properties as differentiating conditions of forest life.</li> <li>7. Soil properties as differentiating conditions of forest life.</li> <li>8. The biological properties of soils in the classification of forest sites. The impact of industry on the soil biological activity.</li> <li>9. The biological properties of soils in the classification of forest sites. The impact of industry on the soil biological activity.</li> <li>10. The relationship between site types and forest plant communities and their use in mapping of sites. Mapping of sites in the Natura 2000 program.</li> <li>11. New trends in the diagnosis of forests sites.</li> <li>12. Analysis of the sites variability.</li> </ol>	
<b>Classes 3 × 2 hours</b>	<ol style="list-style-type: none"> <li>1. Elaboration the results of field sites inventory.</li> <li>2. Interpretation the results of soil analysis for the purposes of sites diagnosis.</li> <li>3. The sites analysis in imbalance conditions between vegetation and soil substrate.</li> <li>4. Develop the fragment of soil-site map based on made sketches in the field.</li> </ol>	

<p><b>Field training</b> Two days (2×7 hours)</p>	<p>Day 1. Identification of the object, set up the typological surface, measurements of trees and list of undergrowth vegetation. The initial separation of the surface with different fertility. Day 2. The soil inventory. Day 3. Clarification the boundaries of sites divisions (forest site types, moisture variants), using the relief elements, the differences in the structure and composition of trees and undergrowth vegetation. The result of the work is drawn sketch maps of sites.</p>
<p><b>Literature</b></p>	<p>Alexandrowicz B.W.. 1972. Typological analysis of the forest. PWN. Warszawa. Brożek S.. 2007. Numerical valuation of soil quality - a tool in the diagnosis of forest sites. Sylwan 2: 35-42. Brożek S., Zwydak M.. 2003. Atlas of Polish forest soils. Publishing house CILP. Brożek S., Zwydak M., Wanic T., Gruba P., Lasota J.. 2007. Trends in improving methods for identifying of forest sites. Sylwan 2: 26-34. Instructions the forest management. 2003. Part 2. Instructions the distinguish and mapping of forest sites. CILP. Warszawa. Classification of Polish forest soils. 2000. CILP. Warszawa. Mąkosa K., Dzierzbicki J., Gromadzki A., Kliczkowska A., Krzyżanowski A.. 1994. The principles of forest sites mapping. IBL, Warszawa. Sikorska E.. 2006. Geography of Polish forests. AR Krakowie. Sikorska E.. 2006. Forest sites. Vol. I. The lowland sites. AR Krakowie.</p>
<p><b>Assessment method</b></p>	<p>practical course - report, field studies - report, final note - test exam</p>