

<b>Subject name</b>	<b>Wood Science</b>	
<b>Subject code</b>	<b>E.2.WSC.SC.ECTIE.L</b>	
<b>Department</b>	<b>Forest and Timber Utilization</b>	
<b>Faculty</b>	<b>Forestry</b>	
<b>Subject supervisor/Lecturer</b>	<b>Professor Anna Barszcz and Dr Radosław Wąsik</b>	
<b>General information</b>	<b>semester</b>	<b>summer</b>
	<b>ECTS credits</b>	<b>3.00</b>
	<b>Lectures total</b>	<b>14</b>
	<b>field classes</b>	<b>16</b>
<b>Objective and general description</b>	<p>The main objective of the course is to teach the issues related to: chemical and submicroscopic wood structure, anatomical structure and macroscopic features of wood of different species, selected physical and mechanical properties of wood, foundations of wood preservation and most important directions of timber processing in Poland.</p> <p>Basic knowledge of forest botany is required.</p> <p><b>Lectures:</b></p> <ol style="list-style-type: none"> <li>1. The foundations of chemical and submicroscopic wood structure, anatomical elements of wood in relation to macroscopic features, exemplified by coniferous and deciduous species.</li> <li>2. Physical properties of wood – theory.</li> <li>3. Mechanical properties of wood – theory.</li> <li>4. The timber base and the wood processing industry in Poland (pulp mill industry, sawmill industry, energetic wood) .</li> <li>5. Wood durability and protection, methods of wood preservation.</li> </ol> <p>Classes – labs:</p> <ol style="list-style-type: none"> <li>1. Determination of selected coniferous species on the basis of anatomical features.</li> <li>2. Determination of selected deciduous species on the basis of anatomical features.</li> <li>3. Determination of coniferous species on the basis of macroscopic features.</li> <li>4. Determination of deciduous species on the basis of macroscopic features.</li> <li>5. Determination of wood density, moisture content and swelling.</li> <li>6. Determination of static bending strength, compression strength and tensile strength of wood.</li> </ol> <p><b>Field classes:</b> Wood defects, assessment of timber quality on stem with use of Polish Standards of timber classification.</p>	
<b>Assessment method</b>	Oral examination	
<b>References</b>	<p>Bowyer J.L., Shmulsky R., Haygreen J.G. 2003. Forest Products &amp; Wood Science. Blackwell Publ.</p> <p>Schoch, W., Heller, I., Schweingruber, F.H., Kienast, F., 2004: Wood anatomy of central European Species.</p> <p>Online version: <a href="http://www.woodanatomy.ch">www.woodanatomy.ch</a></p>	