

<b>Subject name</b>	<b>Non-Chemical Weed Management</b>	
<b>Subject code</b>	<b>E.2.NCWM.SC.ECTIE.R</b>	
<b>Department</b>	<b>Agrotechnology and Agricultural Ecology</b>	
<b>Faculty</b>	<b>Agriculture and Economics</b>	
<b>Subject supervisor/Lecturer</b>	<b>Dr. Agnieszka Synowiec</b>	
<b>General information</b>	<b>semester</b>	<b>Winter or summer</b>
	<b>ECTS credits</b>	<b>6</b>
	<b>Lectures total</b>	<b>24 hrs</b>
	<b>Laboratories</b>	<b>6 hrs</b>
<b>Objective and general description</b>	<p>The sustainability of food production systems, health and environmental consequences of pesticide use are the important global issue. During the course a different weed management strategies, playing role of alternatives to chemical one, will be discussed.</p> <ol style="list-style-type: none"> <li>1. Introduction: basic definitions. Prevention strategies in weed management.</li> <li>2. Weed-crop interactions in managing weed problems.</li> <li>3. Cultural weed management.</li> <li>4. Role of cover crops in weed management.</li> <li>5. Allelopathy as a tool for weed management.</li> <li>6. Bioherbicides.</li> <li>7. Mechanical weed management.</li> <li>8. Night tillage.</li> <li>9. Non-living mulches for weed control.</li> <li>10. Thermal weed control.</li> <li>11. Soil solarization and weed management.</li> <li>12. Role of non-chemical weed management in different food production systems.</li> </ol> <p>Projects based on the problem-solving cases:</p> <ol style="list-style-type: none"> <li>1. Get to know your weed - project aiming at getting familiar with the most important weeds, their biology and crops they infestate.</li> <li>2. Designing a crop-rotation including intercrops to manage the troublesome weed species, including the other cultural methods (i.e. competitive crops, increased seed density). Application of mulches and allelopathic plants to the crop rotation for weed management.</li> <li>3. Designing a proper mechanical soil cultivation and thermal methods to the crop- rotation.</li> </ol>	
<b>Assessment method</b>	<p>Classes: evaluation of the projects, including quality of data analysis, and interpretation, collaboration with other students</p> <p>Lectures: written test exam</p>	
<b>References</b>	<ol style="list-style-type: none"> <li>1. Bond W, Turner RJ, Grundy AC A review of non-chemical weed management. <a href="http://www.organicweeds.org.uk">www.organicweeds.org.uk</a></li> <li>2. Schonbeck M. An ecological understanding of weeds. <a href="http://www.extension.org">www.extension.org</a></li> <li>3. "Weed Science" journal of Weed Science Society of America</li> <li>4. "Weed Research", journal of European Weed Research Society</li> </ol>	

	5. "Progress in Plant Protection", Journal of Institute of Plant Protection in Poland
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