Subject name	**Systematic Botany on Plants Used in Phytotechnologies**	
Subject code	**E.1l.SBP.SC.ECTIE.O**	
Department	**Unit of Botany and Plant Physiology, Institute of Plant Biology and Biotechnology**	
Faculty	**Faculty of Biotechnology and Horticulture**	
Subject supervisor/Lecturer	**Dr. Sc. Ewa Hanus-Fajerska, Ewa Sitek Ph.D.**	
General information	**Teaching period**	**summer semester**
	ECTS credits	**6**
	Lectures total	**6**
	Laboratories and field classes	**24**
Objective and general description	The objective of the course is to familiarize students with the amazing world of plants. A lot of emphasis will be given on unique properties, which allow to exploit particular genera as effective plant material in currently available phytotechnologies.	
Lectures **3 × 2 hours**	1. Origin, evolution and some unique properties of plants 2. Successes, limitations and new methods in domain of phytotechnologies 3. Remediation of land and water resources *versus* knowledge on plant taxonomy	
Laboratories **12 hours** **Field classes** **16 hours**	1. Some surprising properties of Lichens and Bryophytes 2. Lower vascular plants - can they be really useful in remediation technology ? 3. The striking group of Gymnosperms 4. The history of Angiosperms success in diverse technologies 5. Field exercises on some adequately chosen objects of study	
References	Shukla V., Upreti D.K., Baipai. 2014. Lichens to Biomonitor The Environment. Springer Verlag (chosen pages) Mench M., Lepp N., Bert V., Schwitzguébel J.P., Gawronski S.W., Schröder P., Vangronsveld J. 2010. Successes and limitations of phytotechnologies at field scale: outcomes, assessment and outlook from COST Action 895. J. Soils Sediments 10: 1039-1070.	