Subject name	**Plant *in vitro* Cultures**	
Subject code	**E.1.PIVC.SC.ECTIE.O**	
Department	**Department of Genetics, Plant Breeding and Seed Science**	
Faculty	**Faculty of Biotechnology and Horticulture**	
Subject supervisor/Lecturer	**Alicja Chuda, PhD**	
General information	**Teaching period**	**1 semester / winter or summer semester**
	ECTS credit	**6**
	Lectures total	**10 h**
	Lab classes	**20 h**
Objective and general description	The main objective of the course is to understand the basic rules of establishing and maintaining different types of plant tissue cultures.	
Lectures **5 x 2 hours**	1. Introduction – historical outline of tissue cultures 2. A plant tissue culture laboratory 3. Components of tissue culture media 4. Plant material preparation 5. Plant tissue culture applications	
Lab classes **10 x 2 hours**	1. Media preparation 2. Induction of carrot callus 3. Micropropagation of tobacco 4. Germination of seeds under different conditions 5. Acclimatization of the regenerants to the *ex vitro* conditions 6. Lateral buds cultures of brussels sprouts 7. Subculturing of selected plant species 8. Micropropagation of garlic 9. Organogenesis from internode explants 10. Observation of established cultures	
Literature	Plant Cell Culture. Essential Methods. Davey M.R., Anthony P. Willey-Blackwell, 2010. Experiments in Plant tissue culture. Secon Edition. Dodds, J.H., Roberts L.E. Cambridge University Press, 1985. Plant Embryo Culture. Methods and Protocols. Thorpe T.A., Yeung E.C. Humana Press, 2011.	