

Subject name	Embryology of Flowering Plants	
Subject code	E.1.EOFP.SC.ECTIE.O	
Department	Department of Genetics, Plant Breeding and Seed Science	
Faculty	Faculty of Biotechnology and Horticulture	
Subject supervisor/Lecturer	Ewa Grzebelus, Ph.D.	
General information	Teaching period	1 semester / winter or summer semester
	ECTS credit	6
	Lectures total	15 h
	Lab classes	15 h
Objective and general description	Structure and function of generative organs in Angiosperms, micro- and macrosprogenesis, male and female gametogenesis, pollination and pollen-stigma interaction, germination and pollen tube growth, double fertilization, zygotic embryo and endosperm development, apomixis, molecular background of embryological events, use of experimental embryology in plant breeding .	
Lectures 7 x 2 hours 1 x 1hour	<ol style="list-style-type: none"> 1. Floral organ initiation, development and function 2. Development and function of male gametophyte 3. Development and function of female gametophyte 4. Pollination, pollen tube growth, self-incompatibility 5. Double fertilization 6. Endosperm and embryo development 7. Apomixis and its importance 	
Lab classes 7 x 2 hours 1 x 1hour	<ol style="list-style-type: none"> 1. The Angiosperm flower composition 2. Analysis of microsporogenesis and microgametogenesis 3. Analysis of pollen development and their viability 4. Macrosporogenesis and embryo sac development 5. Pollination – analysis of pollen tube growth and double fertilization 6. Embryo development and structure 	
Literature	<p>Raghavan V., 2006. Double fertilization, embryo and endosperm development in flowering plants, Springer Verlag</p> <p>Lersten N., 2004. Flowering plant embryology, Blackwell Publishing.</p> <p>Bhojwani S.S., W-Y. Soh, 2001. Current trends in the embryology of Angiosperms, Springer Verlag.</p> <p>Dafni A., 2000. Pollen and pollination. Springer Verlag.</p> <p>Raghavan V., 1997. Molecular embriology of flowering plants, Cambridge University Press.</p>	