

SYLLABUS

Name of the course (as specified in the approved curriculum) Seed quality evaluation		Number of ECTS Credits 5
Name of the course in Polish Ocena jakości nasion		
Unit providing the course (Department/Institute) Department of Phytopathology, Seed Science and Technology		
Course leader Dr hab. Hanna Dorna		
Field of study Horticulture: Seed Science and Technology	Level II	Semester 1
TYPE OF CLASSES (course load)		
- Lectures		15
- Laboratory classes		35
- Visit to the seed laboratory		5
- Classes consultations		30
- Self-study		40
Total number of hours		125
OBJECTIVE OF THE COURSE		
To acquaint a student with the importance of seed quality for seed industry. To learn methods of seed quality parameters' determination.		
TEACHING METHODS		
Lectures, laboratory classes, visit to the seed laboratory		
Course learning outcomes		The reference to field of study outcomes
Knowledge	O1. Student understands the importance of seed quality for seed industry. O2. Student knows seed morphology and anatomy of selected plant species and methods of seed quality determination.	H2_K01
Skills	O3. Student identifies seeds of basic vegetable and ornamental species. O4. Student is able to evaluate basic seed quality parameters and interpret the obtained results.	H2_S02 H2_S07
Social skills	O5. Student is ready to constantly update knowledge necessary to solve both cognitive and practical problems. O6. Student is aware of his/her professional responsibility for the production of high quality seeds.	H2_C02 H2_C07
Methods of evaluation of outcomes achievement		Symbols of course learning outcomes
- tests, exam - evaluation of seed identification - evaluation of laboratory classes - tests, exam, evaluation of laboratory classes, discussion		O1, O2 O3 O4 O5, O6
TEACHING CONTENT		
<p>Lectures: Introduction to seed formation, development and chemical composition. Seed morphology and anatomy. Introduction to seed laboratory testing. Seed sampling. Purity analysis. Determination of moisture content. Germination test. Biochemical tests of seed viability evaluation. Methods of seed vigour evaluation.</p> <p>Practicals: Seed morphology and anatomy of selected vegetable and ornamental species. Seed purity analysis, determination of seed moisture content and evaluation of seed germination of selected horticultural species. Evaluation of seed viability with the topographical tetrazolium test. Evaluation of pea seed vigour – conductivity test. Visit to ISTA authorized member station in Poznań.</p>		
The course completion criteria and methods exam practicals		Percent of a final grade 70 30

RECOMMENDED LITERATURE

- ISTA, 2012. International Rules for Seed Testing. The International Seed Testing Association, Bassersdorf, Switzerland.
- ISTA, 2008 including Supplement 2010. ISTA Handbook on flower seed testing. The International Seed Testing Association, Bassersdorf, Switzerland.
- Don R., 2003. ISTA Handbook on Seedling Evaluation. The International Seed Testing Association, Bassersdorf, Switzerland
- Leist N., Krämer S., Jonitz A., 2003. ISTA Working Sheets on Tetrazolium Testing, vol. 1. Agricultural, Vegetable and Horticultural Species. The International Seed Testing Association, Bassersdorf, Switzerland
- Leist N., Krämer S., Jonitz A., 2003. ISTA Working Sheets on Tetrazolium Testing, vol. 2. Tree & Shrub Species. The International Seed Testing Association, Bassersdorf, Switzerland
- Hampton J.G., TeKrony D.M. (red.), 1995. Handbook of Vigour Test Methods. The International Seed Testing Association, Zurich, Switzerland