

SYLLABUS

Name: Plant molecular cytogenetics (25-BI-S2-W-PMC-AN)

Name in Polish: Cytogenetyka molekularna roślin

Name in English: Plant molecular cytogenetics

Information on course:

Course offered by department: Faculty of Biological Sciences

Course for department: Faculty of Biological Sciences

Default type of course examination report:

Grading

Language:

English

Short description:

Prerequisites regarding knowledge, skills, and social competences for the course/module:

BSC in Biology or related sciences.

Student's own work:

- preparing for laboratory classes: 20h
- reading of literature: 25h
- preparing for presentations and discussions: 25h

Description:

Educational aims:

Obtaining knowledge on cytogenetic and molecular cytogenetic techniques used in plant research.

Course content:

- chromosome preparation.
- fluorescent in situ hybridization.
- flow cytometry.
- poliploidy.
- plant genomes.
- fluorescent microscopy.

Bibliography:

Mandatory and recommended reading list:

Schwarzacher T, Heslop-Harrison JS (2000) Practical in situ Hybridization. Oxford,UK: Bios;

Heslop-Harrison JS, Schwarzacher T (2011) Organisation of the plant genome in chromosomes. The Plant Journal 66:18-33.

Learning outcomes:

Intended learning outcomes

Student:

K_W03

defines the terms: genome, chromosome, karyotype, polyploidy;

K_W10describes major molecular cytogenetic techniques used for assessment of biodiversity;

K_U01

performs fluorescent in situ hybridization and determine the ploidy of the plant;

K_U04

chooses the appropriate research method;

K_K06

develops discipline, duty and accuracy of work, and follow the rules of working in a laboratory where potentially toxic material is present.

Assessment methods and assessment criteria:

Assessment methods for the intended learning outcomes:

- assessment of activity during laboratory classes,
- oral presentation.

Credit requirements for individual components of the course/module:

- assessment of activity during laboratory classes,
- oral presentation.

Course credits in various terms:

<without a specific program>			
Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	4	2024/25-L	