SYLLABUS
Spring semester 2027
Lecturer:

Title of the course	Trees and forests – now and the future (set 2)
Institution where the course will take place	Institute of Dendrology Polish Academy of Sciences
Language	English
Learning objectives	**P8S_WG** PhD Student gains knowledge about the role of hybridization in plant evolution, principles of forest experimentation and conservation of genetic resources, clonal forestry, applicability of various -"omics" methods in tree and forest research, and about reproductive strategies of trees and shrubs. **P8S_WK** PhD Student knows and understands the economic, legal, ethical and other essential conditions of conducting scientific research, as well as the principles of knowledge transfer to the economic and social sphere in the introduced subject. **P8S_UW** PhD student is able take advantage of knowledge to creatively identify and formulate research problems in various aspects of forest sciences, and to draw conclusions on the basis of research results. **P8S_UK** PhD student is able to participate in the debate addressing research problems introduced in the subject. **P8S_KK** PhD student is ready to critically evaluate the scientific achievements in forestry discipline, and to recognize the value of knowledge in solving cognitive and practical problems
Learning outcomes, according to Attachment 2 to the Programme of the Study (valid from October 1st 2026)	P8S_WG (pkt. 1,2,3), P8S_WK (pkt.1, 4), P8S_UW (pkt. 1,2), P8S_UK (pkt. 2,3), P8S_KK (pkt. 2,3);
Type of the course	Non-obligatory lecture
Semester/Year	Spring semester 2026
Name of the lecturer	prof. dr hab. Witold Wachowiak dr hab. Daniel J. Chmura, prof. ID PAN prof. dr hab. Paweł Chmielarz dr hab. Teresa Hazubska-Przybył dr hab. Agnieszka Szuba, prof. ID PAN dr hab. Emilia Pers-Kamczyc, prof. ID PAN
Name of the examiner	credits: dr hab. Daniel J. Chmura, prof. ID PAN

Teaching methods	Lecture, also with the use of audiovisual means via MS TEAMS
Attendance requirements	Knowledge of the basis of plant ecology, plant biology and physiology and biochemistry, plant genetics, statistics.
Number of ECTS points	2 ECTS
Number of lectures	12
Didactic methods	Lecture with multimedia presentation, case study method, and didactic discussion. Student: own work with the literature.
Methods of verification and assessment of learning outcomes	**Assessment methods**: - written test - active participation in lectures and discussion
Conditions of a positive evaluation	Positive grade on the written test. Attendance is obligatory, except for documented earlier planned participation in conferences, training courses, and scientific workshops related to the implementation of the doctoral thesis, sick leave, a significant life-event, or an emergency.
Course content	• Hybridization in evolution • Forest experiments • Conservation of genetic resources • Clonal forestry • -“omics” in forest research • Reproductive strategies of woody plants
Literature of the course materials	Literature will be provided during the lectures