

SYLLABUS
Spring semester 2025/2026

Lecturer:

Title of the course	Trees and forests – now and the future (set 1)
Institution where the course will take place	Institute of Dendrology Polish Academy of Sciences
Language	English
Learning objectives	<p>P8S_WG PhD Student gains knowledge about the various aspects of biology of woody plants' seeds, the effects of various interactions on trees and forests, climatic and other effects on forest tree and shrub species distributions, the causes and consequences of biological invasions in forests, and the trends in woody plant physiology research.</p> <p>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.</p> <p>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.</p> <p>P8S_UK PhD student is able to participate in the debate addressing research problems introduced in the subject.</p> <p>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</p>
Type of the course	Non-obligatory lecture
Semester/Year	Spring semester 2026
Name of the lecturer	prof. dr hab. Marian J. Giertych dr hab. Marcin K. Dyderski, prof. ID PAN dr hab. Marcin Pietras, prof. ID PAN prof. dr hab. Tomasz Pawłowski dr Hanna Fuchs dr hab. Ewa Kalemba, prof. ID PAN
Name of the examiner	credits: dr hab. Daniel J. Chmura
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	<ul style="list-style-type: none"> • Oaks – biodiversity hotspot • Influence of climate on tree species distribution • Alien and invasive species in forests • Environmental effects on seeds of woody plants • Methods in seed quality research • Now and future of woody plants physiology
Literature of the course materials	Literature will be provided during the lectures