

SYLLABUS

Fall semester 2026/2027

Lecturer: dr Weronika Żukowska, dr hab. Daniel J. Chmura, prof. IDPAN,
prof. dr hab. Marian Giertych, dr Katarzyna Sękiewicz, dr Łukasz Walas

Title of the course	Biological foundations of forestry (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 principles of forest genetics and tree breeding, the role and use of genetics in taxonomy and plant conservation, and statistics used in typical field and laboratory plant research. 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; is capable to identify appropriate analytical approach for specific research problems in 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. 1,2,5), P8S_WK (pkt.1, 4), P8S_KR (pkt. 2), P8S_KO (pkt. 2), P8S_UW (pkt. 1,2), P8S_UU/UO (pkt. 3), P8S_KK (pkt. 2,3), P8S_UK (pkt. 2,3)
Type of the course	Obligatory lecture
Semester/Year	Fall semester 2026/2027
Name of the lecturer	dr Weronika Żukowska dr hab. Daniel J. Chmura, prof. IDPAN prof. dr hab. Marian Giertych dr Katarzyna Sękiewicz; dr Łukasz Walas
Name of the examiner	credits: dr hab. Daniel J. Chmura
Teaching methods	Lecture 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	3 ECTS
Number of lectures	20
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	• Genetics of forest trees • Forest tree improvement • Statistics in forest and tree research • Genetics in taxonomy and conservation research
Literature of the course materials	Literature will be provided during the lectures