Dissertation Topics for the PhD Study Programme: Forest Biology

Academic Year 2026–2027

Department of Forest Ecology

1. Dynamics and structure of natural forest ecosystems (prof. Svoboda, Dr. Čada)
2. Biomass dynamics and carbon stocks in natural forest ecosystems (prof. Svoboda, Dr. Čada)
3. Structure and development of forest ecosystems under various degrees of anthropogenic influence (prof. Svoboda, Dr. Čada)
4. Disturbances and their impact on the dynamics of natural and managed forest ecosystems (prof. Svoboda, Dr. Čada)
5. Forest ecosystem functions in relation to forest ecosystem management (prof. Svoboda, Dr. Mikoláš)
6. Biodiversity and forest ecosystem management (Dr. Mikoláš, Dr. Hofmeister)
7. The influence of forest diversity and species composition on their productivity and resilience to climate change (in natural forests and forest plantations, from boreal to tropical zones) (Dr. Matula)
8. Growth and stability of tropical forests along climatic gradients (Dr. Matula)
9. Forest biodiversity in relation to the history of forests and landscape in Central Europe (Dr. Hofmeister)

Department of Forest Genetics and Physiology

1. Stress indicators of forest trees and their genetic variability (Dr. Stejskal)
2. Modernization of forest tree breeding strategies for climate change adaptation (prof. Lstibůrek)
3. The role of mycorrhizal fungi in evaluating glucanase and chitinase activity in the genus Fagus (doc. Tomášková)
4. Genetic structure of Norway spruce using the SNP array genotyping platform (Dr. Korecký)
5. The use of advanced phenotyping for the estimation and early selection of growth, resistance, and reproductive traits of forest trees (Dr. Čepl)

Department of Forest Protection and Entomology

1. Biodiversity in managed forests: a multi-taxonomic comparison of disturbance impacts (doc. Horák)
2. Modeling the spread of invasive bark beetle species (prof. Holuša)
3. The influence of magnetic fields and magnetoreception on invertebrate behavior (prof. Holuša)