# OFFER 2019 – 2020 EUROPE

#### Erasmus+ traineeships

Grado en Ingeniería Forestal y de Medio Natural

#### Forest Management Institute Brandýs nad Labem (FMI)

Título	Forest Management Institute Brandýs nad Labem (FMI)
Titulación	Ingeniería Forestal
Descripción	We can generally offer these areas of activities: NATIONAL FOREST INVENTORY REGIONAL PLANS OF FOREST DEVELOPMENT INFORMATION DATA CENTRE TRADING THE FOREST TREE SPECIES REPRODUCTION MATERIAL FOREST HEALTH CONDITION MONITORING GAME MANAGEMENT AND STATE FOREST POLICY
Idioma	Inglés (mínimo B1 )
Horario	5 hours per day, duration 1-3 months
Plazas	2
Fecha Inicio	August-November (duration and dates to be determined upon request)

Título	Department of Forest Ecology
Titulación	Ingeniería Forestal
Descripción	Participation in research projects Data collection and data processing, Preparation of research reports and presentations, Data analysis and processing in the dendrochronological labs.
Horas/día	5 hours per day, duration 1 – 5 months
Idioma	Inglés (mínimo B1)
Plazas	1
Fecha Inicio	August-January (duration and dates to be determined upon request)

Título	Department of Silviculture
Titulación	Ingeniería Forestal
Descripción	Participation on research projects Data collection and data processing, Preparation of research reports and presentations
Horas/día	5 hours per day, duration 1 – 5 months
Idioma	Inglés (mínimo B1)
Plazas	1
Fecha Inicio	August – January (duration and dates to be determined upon request)

Título	Department of Wood Products & Construction	
Titulación	Ingeniería Forestal	
Descripción	The main aim of the practical trainning is participation and realization of research project focused on estimation and improvement of adhesives properties by nanoparticles modifications. Project activities: literature review planning of measurement samples preparation data collection and data processing statistical assessment preparation of research reports presentations of the research results	
Horas/día	5 hours per day, duration 1 – 5 months	
Idioma	Inglés (mínimo B1)	
Plazas	1	
Fecha Inicio	August – January (duration and dates to be determined upon request)	

Título	Department of Wood Processing
Titulación	Ingeniería Forestal
Descripción	Participation in research projects – activities related to wood structure and properties; Data collection and data processing; Preparation of final reports; Works in labs with testing machines, microscope, image analysis software
Horas/día	6 hours per day, duration 5 months
Idioma	Inglés (mínimo B1)
Plazas	2
Fecha Inicio	September – January (duration and dates to be determined upon request)

**OFERTA PR EU-06** 

Título	Department of Game Management and Wildlife Biology	
Titulación	Ingeniería Forestal	
Descripción	Participation in research projects, data collection and data processing, preparation of research reports and presentations. For our telemetry team we are looking for 2 enthusiastic and motivated students who are not scared of field work and are keen on spatial ecology. Their work will be focused on determining the microhabitat selection of wild boar, red deer, and sika deer which are marked with GPS collars. Student's main task will be to evaluate the effects of season, human distribution and habitat quality on microhabitat preference of collared animals. The work will consist of 3 days of field work and 2 days of desk based work (data analyses) per week. The offered topic could be also suitable for bachelor of master thesis project. At least basic knowledge of ArcGIS, GPS devices, and R software is desired.	
Horas/día	5 hours per day, duration 1 – 5 months	
Idioma	Inglés (mínimo B1)	
Plazas	2	
Fecha Inicio	August – November (duration and dates to be determined upon request)	

Título	Department of forest protection and entomology
Titulación	Ingeniería Forestal
Descripción	Determination of insects Statistical analyses of biological data Bark beetles dissections Mycorrhiza analyses
Horas/día	5 hours per day, duration 1 – 5 months
Plazas	1
Idioma	Inglés (mínimo B1)
Fecha Inicio	Septiembre – Enero (duration and dates to be determined upon request)

**OFERTA PR EU-09** 

### **University of Life Sciences in Warsaw**

Título	Department of Forest Botany, Faculty of Forestry	
Titulación	Ingeniería Forestal	
Descripción	<ul> <li>Erasmus + Research internships</li> <li>Last year undergraduate students and Master's students</li> <li>a) cambium activity and tree wood formation. The project refers to microscopic properties of wood of indigenous and alien to Poland's tree species. The main task of a participant is microscopic measurement of cells dimensions and data analysis.</li> <li>b) forest communities dynamics. The project refers to vegetation transformations of dry-pine-forest (<i>Cladonio-Pinetum</i>). The main task of a participant is field gathering and analysis of vegetation data and laboratory measurements of soil samples properties.</li> <li>c) forest plants - animals interactions. The project refers to ungulates diet in various forest ecosystems. The main task of a participant is macro- and microscopic determination of food items collected from rumens of harvested deers and data analysis.</li> <li>It will be possible to implement the performed measurements by the participant into her/his diploma thesis on the basis of individual agreement.</li> </ul>	
Horas/día	6 hours/day, 5 days/week, duration 2 – 4 months	
Plazas	3 (at the same time)	
Idioma	Inglés (B2, mínimo B1)	
Fecha Inicio	1 September (duration and dates to be determined upon request)	

Título	Faculty of Forestry, Institute of Environmental and Earth Sciences
Titulación	Ingeniería Forestal
Descripción	Topics (in German) Bodenkunde, Standortskunde, Bodenschutz Working plan Bodenschutz im Wald Kohlenspeicherung im Boden und im Wald, Forstliche Standortskunde, Wirkung der Waldbewirtschaftung auf dem Boden, Waldökosystemforschung
Horas/día	2-5 months, 5-6 hours/day
Idioma	Alemán (B2)
Plazas	2
Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be determined upon request)

	Título	Faculty of Forestry, Institute of Environmental and Earth Sciences
<b>OFERTA PR EU-06</b>	Titulación	Ingeniería Forestal
	Descripción	TOPICS SOIL CONSERVATION SOIL POLLUTION WORKING PLAN INVESTIGATIONS OF URBAN SOILS SOIL PROPERTIES OF FORESTLANDS ON SUBURBS HEAVY METALS IN SOIL (ICP-OES) CARBON STORAGE OF SOILS, GAP INVESTIATIONS
	Horas/día	2-5 months, 5-6 hours/day
	Idioma	Inglés (B2)
	Plazas	2
	Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Environmental and Earth Sciences
Titulación	Ingeniería Forestal
Descripción	TOPICS: CLIMATE CHANGE AND IMPACTS IN FOREST ECOSYSTEMS FOREST MICROCLIMATE WORKING PLAN: PAST AND FUTURE CLIMATE TENDENCIES (DATA ANALYSIS) OBSERVED AND EXPECTED IMPACT OF DROUGHTS IN THE HUNGARIAN FORESTS (EXCURSION AND DATA ANALYSIS) COMPARISON WITH CASE STUDIES FROM THE HOME COUNTRY OF THE STUDENT ANALYSES WITH THE DECISION SUPPORTING TOOL DEVELOPED BY THE HOST INSTITUTION FOR CLIMATE CHANGE ADAPTATION FOREST MICROCLIMATE MEASUREMENTS
Horas/día	2-5 months, 5-6 hours/day
Idioma	Inglés (B2)
Plazas	2
Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be determined upon request)

A PR EU-06	Título	Faculty of Forestry, Institute of Botany and Nature Conservation
	Titulación	Ingeniería Forestal
	Descripción	Topic: Ambrosia Artemisiifolia population dynamic survey Working plan: Field work: Measurement of Ambrosia Artemisiifolia specimen. Soil sample collection LABORATORY WORK: Analysis of soil seed bank Measurement of Ambrosia Artemisiifolia biomass.
ER	Horas/día	4-5 days/week, 8-10 hours/day
OFI	Idioma	Inglés (B2)
	Plazas	1
	Fecha Inicio	1.0725.09. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Botany and Nature Conservation
Titulación	Ingeniería Forestal
Descripción	Topic: Coenological analyses and habitat mapping Working plan: Coenological analyses in Gemenci-forest Habitat mapping in Mecsek-Mountains Studies on population size of Helleborus odorus
Horas/día	5 days/week, 8 hours/day
Idioma	Inglés (B2)
Plazas	1
Fecha Inicio	1.0431.05. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Botany and Nature Conservation
Titulación	Ingeniería Forestal
Descripción	Topic: DRY GRASSLAND REGENERATION AT PINE/ WHITE LOCUST CUTTING AREA WORKING PLAN: BOTANIC MONITORING OF PANNONIAN SANDY GRASSLAND VEGETATION VEGETATION CHANGES DIRECTION OF PINUS SYLVESTRIS AND ROBINIA PSEUDOACACIA CUTTING AREA LEARNING OF PANNONIAN STEPPE VEGETATION AND SPECIES IN 3 RESEARCH TERRITORIES NEAR GYŐR, BUDAPEST AND SZEGED MAINLY FIELD RESEARCHES IN APRIL-MAY, 2015
Horas/día	3 months, 1-2 days/week, 8-10 hours/day
Idioma	Inglés (B2)
Plazas	2

Fecha Inicio

1.04.-30.06. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Forest Resources Measurement
Titulación	Ingeniería Forestal
Descripción	TOPICS CONTINUOUS COVER FORESTRY FOREST GROWTH AND YIELD MODELING WORKING PLAN TRANSFORMATION OF STANDS INTO CCF SYSTEM MODELING OF THE TRANSFORMATION PROCESS SINGLE STEM G&Y MODELS
Horas/día	2 months, 5-6 hours/day
Idioma	Inglés (B2)
Plazas	2
Fecha Inicio	1.021.04. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Forest- and Environmental Techniques
Titulación	Ingeniería Forestal
Descripción	<b>TOPIC:</b> ENERGY FOREST PLANTATIONS <b>WORKING PLAN:</b> SITUATION OF ENERGY FOREST PLANTATIONS IN THE HOME COUNTRY OF THE STUDENT (KIND OF TIMBER; VARIETY) COMPARISON WITH HUNGARIAN FOREST PLANTATION SITUATION MECHANISATION OF ENERGY FOREST PLANTATIONS
Horas/día	2-3 months, 5-6 hours/day
Idioma	Inglés (B2)
Plazas	2
Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be

Título	Faculty of Forestry, Institute of Geomatics and Civil Engineering
Titulación	Ingeniería Forestal
Descripción	TOPIC: FOREST HYDROLOGY WORKING PLAN: FIELD WORKS: HYDROLOGICAL MEASUREMENTS LAB WORKS: PHYSICAL PARAMETER ESTIMATION OF SOILS, DATA PREPARATION, MODELLING IN HYDROLOGY
Horas/día	2-5 months, 5-6 hours/day
Idioma	Inglés (B2)
Plazas	1-2
Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Chemistry
Titulación	Ingeniería Forestal
Descripción	TOPICS: ANAEROBE FERMENTATION WORKING PLAN: LAB SCALE ANAEROBE FERMENTATION OF MICROALGAE AND/OR LIGNOCELLULOSE SUBSTRATES CHEMICAL ANALYSIS OF SUBSTRATES AND SLUDGES APPLICATION OF GC-MS AND HPLC-MS TECHNIQUES FOR STUDYING OF INHIBITORS OF ANAEROBE PROCESSES
Horas/día	2-5 months, 5-6 hours/day
Idioma	Inglés (B2)
Plazas	2
Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be determined upon request)

Título	Faculty of Forestry, Institute of Chemistry
Titulación	Ingeniería Forestal
Descripción	TOPICS: PLANT CHEMISTRY WORKING PLAN: PROPERTIES OF LEAF, BARK AND OTHER WOODY TISSUES FOR THE PURPOSE OF FUTURE UTILIZATION
Horas/día	2-5 months, 5-6 hours/day
Idioma	Inglés (B2)
Plazas	1
Fecha Inicio	1.0231.01., except 1.06.– 31.08. (duration and dates to be determined upon request)

	Título	Faculty of Forestry, Institute of Mathematics
	Titulación	Ingeniería Forestal
<b>PR EU-06</b>	Descripción	TOPIC: NUMBER THEORY: DIOPHANTINE EQUATIONS, LINEAR RECURRENCES WORKING PLAN: PRE-ARRANGEMENT REQUIRED
E	Horas/día	3-4 months, 4 hours/day
Ë	Idioma	Inglés (B2)
G	Plazas	1
	Fecha Inicio	1.0931.01. (duration and dates to be determined upon request)

#### **Título** Faculty of Forestry/Department of Silviculture Titulación Ingeniería Forestal The project of Ministry of Education SR and Slovak Academy of Sciences titled "Optimalization of production and outplanting technologies of reproductive material of forest tree species for adverse environmental conditions" is being solved in the Department of Silviculture of Technical University in Zvolen. The project is intended to obtain knowledge about: - effects of growth substrate and application of useful microorganisms (ectomycorrhizal and antagonistic fungi, bacteria) on seeds germination and development of Norway spruce and Scots pine seedlings grown in semi-operational and operational conditions - effects of planting stock type (bareroot and containerized), planting time and application of additives (mainly hydrogels and microbial additives) on Descripción survival, health state, growth and physiological quality of Norway spruce, Scots pine and European beech plantations. The task of student will be to participate in estimation of complex quality of experimental material in experimental plots and in laboratory in order to assess the effects of treatments tested. Estimation of the experimental material implies: measurement of physiological parameters, collection of substrate and foliage samples for chemical analysis, lifting of seedlings in nursery and plantations; measurement of growth parameters of produced and outplanted seedlings in laboratory and planting sites, respectively; counting of short roots, morphological estimation of ectomycorrhizas under dissecting microscope, collection of samples for ectomycorrhiza identification by DNA analysis. Horas/día To be determined Idioma Inglés (mínimo B1) Plazas 1

**Fecha Inicio** October – November (duration and dates to be determined upon request)

Título	Faculty of Forestry, Department of Phytology
Titulación	Ingeniería Forestal
Descripción	There is a lack of knowledge about physiological resistance of trees against heat stress and especially about intraspecific variability in the response to high temperature. The aim of the work would be to participate in research on heat sensitivity of fir ( <i>Abies alba</i> ) and beech ( <i>Fagus sylvatica</i> ) provenances originated from different countries and conditions. The chlorophyll <i>a</i> fluorescence parameters will be used for quantification of stress response. Relationship between primary photosynthesis response and original geographical and climatic characteristics as well as phenology will be analysed.
Horas/día	To be determined
Idioma	Inglés (mínimo B1)
Plazas	1
Fecha Inicio	June 15 -— August 15 (duration and dates to be determined upon request)

Título	Faculty of Forestry, Department of Phytology
Titulación	Ingeniería Forestal
Descripción	Sampling of experimental material for non-invasive genetic studies of capercaillie and chamois (faeces, feathers) in the field. Laboratory work in molecular lab (isolation of DNA, fragmentation analyses) Evaluation of data
Horas/día	To be determined
Idioma	Inglés (mínimo B1)
Plazas	1 for each period
Fecha Inicio	August 1 – December 20, and March 1 – June 30 (duration and dates to be determined upon request)

Título	Faculty of Forestry, Department of Phytology
Titulación	Ingeniería Forestal
Descripción	Participation in the study of plant diversity change induced by forest management on the sites of natural beech forests. Field sampling of herb layer, soil properties and dendrometric variables in the forest communities in Carpathian mountains. Processing of field samples including herbarium specimens, data entering and analysing.
Horas/día	To be determined
Idioma	Inglés (mínimo B1)
Plazas	1 for each period
Fecha Inicio	June 1 September 30, and May 1 July 31 (duration and dates to be determined upon request)

Título	Faculty of Forestry/Department of forest management and geodesy
Titulación	Ingeniería Forestal
Descripción	<ul> <li>The aim of work during the internship will focus on comparison of terrestrial laser scanning, terrestrial and airborne (UAV) photogrammetry in use for forestry. At the Department of forest management and geodesy we have the most advanced technologies, which are still not used in forestry practice in the world. Therefore, we consider this research to be very important for the further development of forestry in the world.</li> <li>The work will be divided into three steps.</li> <li>1) First step will be data collection. We will measure position of trees, height of trees, diameter of trees and crown projection by methods that are currently used in practice (FieldMap technology, caliper, Vertex and so on). Then we will measure those trees by terrestrial laser scanning, terrestrial and airborne (UAV) photogrammetry.</li> <li>2) Second step will be postprocessing. For postprocessing we will use commercial software (Faro Scene, Agisoft Photoscan, ArcGIS). Also we will use software developed by Milan Koren (GIS3DT TLS).</li> <li>3) Third step will be processing of results and preparation of publication. Strong emphasis will be aimed at publishing of the obtained results or at least the preparation of the publication. Length, start and end of stay are negotiable.</li> </ul>
Horas/día	To be determined
Idioma	Inglés (mínimo B1)
Plazas	2
Fecha Inicio	01.08. – 31.10. and 01.03.2016 – 31.05. (duration and dates to be determined upon request)

#### **Título Department of Forest Harvesting, Logistics and Ameliorations** Titulación Ingeniería Forestal Planned analysis should be carried out in forest biomass production variants: moto-manual and selected harvesting and transport technologies for energy plantations and production forests in the Slovak Republic. The timetable of analyses needs to be adapted to the needs of operational practices, so that it will be modified. The universal method of scientific research (analytic-synthetic method) - a systemic approach, characterized by a focus on analysis and subsequent synthesis of acquired knowledge to solve complex of problems will be used. Multidisciplinary approach to solve the project foresees the necessity of mutual and synergy alignment and using the knowledge from several scientific disciplines. Assessment of the environmental criteria, particularly in the relation to harvesting and transport erosion, is closely linked to Descripción the results from the risk analysis of forest management. This is the assessment of environmental field parameters, structure and age of the forest stands, silvicultural system, felling methods, etc. and impacts of used forest machinery in the process of harvesting and skidding the biomass on the environment. This is particularly the soil degradation due to harvesting and transport erosion. Monitored will be also its impact on coppice and stand, in terms of the caused damage. For the evaluation of ergonomic suitability the deployment of assessed harvesting and transport technology the data from the evaluation of the social aspects of risk management on forest land and energy plantations. Included will be also excursions to the selected forest enterprises and wood processing plants. Applicants will be also involved in the implementation of selected parts of the learning process. Horas/día Part time, to be determined Idioma Inglés (mínimo B1) **Plazas** 1 June – September (duration and dates to be determined upon request) Fecha Inicio

Título		Faculty of forestry
Titulació	ón	Ingeniería Forestal
Descripc	ción	<ul> <li>1.6.2015-30.9.2015 Proposed plan of work</li> <li>Estimation of carbon fluxes on sites disturbed by windthrow, fire and bark beetle outbreak by direct measurement by chamber method. Regular manual measurement by PP Systems and Vaisala instruments on experimental plots in the Tatra National Park. Measurement of soil temperature, moisture, solar radiation and leaf area index on fixed plots. Detailed mapping of plant communities by GPS and interpretation of aerial photographs. Data processing and interpretation.</li> <li>1.5.2016-30.9.2016 Proposed plan of work</li> <li>Estimation of carbon fluxes on sites disturbed by windthrow, fire and bark beetle outbreak by direct measurement by chamber method. Regular manual measurement by PP Systems and Vaisala instruments on experimental plots in the Tatra National Park. Measurement of soil temperature, moisture, solar radiation and leaf area index on fixed plots. Detailed mapping of plant communities by GPS and interpretation of carbon fluxes on sites disturbed by windthrow, fire and bark beetle outbreak by direct measurement by chamber method. Regular manual measurement by PP Systems and Vaisala instruments on experimental plots in the Tatra National Park. Measurement of soil temperature, moisture, solar radiation and leaf area index on fixed plots. Detailed mapping of plant communities by GPS and interpretation of aerial photographs. Data processing and interpretation.</li> <li>1.6.2015-31.10.2015 Proposed plan of work</li> <li>Bark beetle development in alpine forest under changing climate. Field observation of population dynamics (pheromone trap catches, swarming date and intensity, number of eggs, survival ratio, etc.).</li> <li>Theoretical population size by modelling (Phenips) and comparison with real size. Mapping of affected stands, estimation of future development, risk analysis.</li> </ul>
Horas/d	ía	To be determined
Idioma		Inglés (mínimo B1)
Plazas		3
Fecha In	icio	1.630.9.; 1.530.9.; 1.631.10. (duration and dates to be determined upon request)