Course name: **FOREST PROTECTION AND FIRE PREVENTION**

ECTS	3
Course status	optional, facultativ
Course final assessment /evaluation of outcomes	Exam / graded credit
Prerequisite	graduated first degree programs such as Bachelor (BA or BSc.) in forestry

Main field of study: **ERASMUS +**

Educational profile	General academic
Code of studies and education level	MSc
Semester of studies	winter or summer
Language of instruction	English

Course offered by:

Name of faculty offering the course	Faculty of Forestry
Name of department offering the course	Department of Forest Ecosystems Protection
Course coordinator	Bartłomiej Bednarz PhD, DSc. Eng.

Learning outcomes:

Symbol of outcome	Description of the learning outcome	Reference to main field of study outcomes	Area symbol*
KNOWLEDGE – student knows and understands			
LES_OLZP_W01	an extended knowledge about the risks associated with abiotic, biotic and anthropogenic factors, limiting the risk of forest damage, knows the principles of biocenotic processes control and principles of protection of forest ecosystems, knows and understands the principles of planning and organizing work in this area, has an extended knowledge about forest fires risk determination and fire prevention strategies	LES2_W02	RL
SKILLS – student is able to			
LES_OLZP_U01	determine the health status and make risk forecasts, plan and supervise the use of means and methods for insect pests control, is able to regulate biocenotic processes in forest ecosystems using biological, biotechnical and hylotechnical methods, is able to monitor forest fire risk and planning the forest fires prevention strategies	LES2 _U05	RL
SOCIAL COMPETENCIES – student is ready to:			
LES_OLZP_K01	critically assess and participate in discussions in terms of cognitive and practical value of knowledge	LES2 _K01	RL
LES_OLZP_K02	critically assess themselves, teams in which work and to lead a group and take responsibility for it, as well as act in a resourceful manner	LES2 _K02	RL

Teaching contents

Lectures	**12 hours**
Topics	Introduction to forest protection in Poland Basic problems of forest risks Biotic and abiotic threats causing destabilization of forest ecosystems in Poland The consequences of anthropopression in forest areas

	Causes, mechanisms and effects of currently observed changes in nature with particular emphasis on processes registered in forests Biotic, abiotic and anthropogenic risk factors assessment and strategies of prevention Forest fire risk in Poland - methods of fires risk determination and prevention strategies
Accomplished learning outcomes	LES_OLZP_W01; LES_OLZP_W02
Means of verification, rules and criteria of assessment	Written exam limited in time (minimum 55% of correct answers to obtain the 3.0 mark); the participation of the positive grade from the lectures in the final evaluation is 60%.

Classes:	**15 hours**
Topics	Protective procedure in forests threatened by biotic factors - analysis of game management consequences for forest ecosystems Protective procedure in forests threatened by abiotic factors - analysis of consequences for forest ecosystems Protective procedure in pine stands threatened by primary pest insects - analysis of consequences for forest ecosystems Protective procedure in forest stands threatened by secondary pest insects Forest susceptibility to the negative impact of factors anthropogenic Protective procedure in forests threatened by fires risk - determination of forest fire hazard category and daily degree of fire risk Forest fires prevention strategies
Accomplished learning outcomes	LES_OLZP_U01; LES_OLZP_K01; LES_OLZP_K02
Means of verification, rules and criteria of assessment	Passing projects on a grade. Assessment of group activity and skills, the participation of the positive grade from the completion of the exercises in the final evaluation is 30%.

Field training:	**16 hours**
Topics	Methods of forest protection and forest fire prevention in practice. Implementation, according to the current procedure in the State Forests. Recognize and classify the threat degrees to forests due to influence of anthropopression. Practices to identify different harmful factors occurred in different stages of stand development as exemplified by selected case study. Spring control of the threat condition of pine stands in the area of phytophagous insects outbreak. Preparing a group report of the results of field practices and recommendations regarding the forest ecosystem protection.
Accomplished learning outcomes	LES_OLZP_U01, LES_OLZP_K01, LES_OLZP_K02
Means of verification, rules and criteria of assessment	Passing the project on a grade. Assessment of group activity and skills, the participation of the positive grade from the completion of the exercises in the final evaluation is 10%.

References:

Basic	Głowacka B., (red). (2013). Metodyka integrowanej ochrony drzewostanów liściastych. Instytut Badawczy Leśnictwa. . DGLP. Warszawa, pp.87. ISBN 978-83-62830-27-5. Głowacka B., (red). (2013). Metodyka integrowanej ochrony drzewostanów iglastych. Instytut Badawczy Leśnictwa. . DGLP. Warszawa, pp.120. ISBN 978-83-62830-28-2. Instrukcja ochrony lasu (2012). Centrum Informacyjne Lasów Państwowych. DGLP Warszawa. Instrukcja ochrony przeciwpożarowej lasu (2020).Centrum informacyjne Lasów Państwowych. DGLP. Warszawa, pp. 132. ISBN 978-83-65659-49-1.
Supplementary	Burley, J., Youngquist, J., Evans, J. (2004). Encyclopedia of forest sciences. Elsevier

	Forests in Poland (2019). The State Forests Information Centre, Warszawa. Lieutier, F., Day, K. R., Battisti, A., Grégoire, J.-C., & Evans, H. F. (Eds.). (2004). Bark and Wood Boring Insects in Living Trees in Europe, a Synthesis. Dordrecht: Springer Netherlands. Łęski O. (red) (2001). Poradnik ochrony lasu. Oficyna Edytorska „Wydawnictwo Świt". Warszawa, pp. 500.

Structure of learning outcomes

Area of academic study: R – Agricultural sciences, L -Forestry	3	ECTS

Structure of student activity

Contact hours		50	hrs.	2	ECTS**
Including:	lectures	12	hrs.		
	classes and seminars	31	hrs.		
	consultations	5	hrs.		
	participation in research	…	hrs.		
	obligatory traineeships		hrs.		
	participation in examination	2	hrs.		
e-learning		…	hrs.	….	ECTS**
student own work		25	hrs.	1	ECTS**

*Areas of academic study in the fields of: H- humanities; S - social studies; P – biological sciences; T – technological sciences; M- medical, sport and health sciences; R – Agricultural, forestry and veterinary sciences; A – the arts
** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes