

Subject name	Silviculture	
Subject code		
Department	Department of Silviculture, Institute of Forest Ecology and Silviculture	
Faculty	Faculty of Forestry	
Subject supervisor/Lecturer	Maciej Pach, Ph.D. phone: +48 12 6225371 rlpach@cyf-kr.edu.pl GoogleScholar , ResearchGate , LinkendIn	
General information	Teaching period	winter semester
	ECTS credit	4
	Lectures total	15
	Classes	5
	Field training	35
Objective and general description	The main objective of the course is to familiarize participants with the following topics: silvicultural planning; silviculture of uneven-aged stands composed of light-demanding species; forest management at high mountain altitudes; range formation of the main forest tree species in the Holocene; principles of silvicultural planning in stands threatened by disintegration; fast-growing tree species plantations; the use of stand growth simulators in silviculture.	
Lectures 7 x 2 hours 1 x 1 hour	<ul style="list-style-type: none"> ➤ Management of uneven-aged stands composed of light-demanding tree species (2 hours), ➤ Silviculture at high mountain altitudes: restoration of upper timber line, afforestation, regeneration and tending (3 hours), ➤ The lecture covering the author's current research issues (2 hours), ➤ Range formation of the main forest tree species in the Holocene (2 hours), ➤ Fast-growing tree species plantations (4hours), ➤ The use of stand growth simulators in silviculture (2 hours). 	
Classes 2 x 2 hours 1 x 1 hour	<ul style="list-style-type: none"> ➤ Silvicultural planning in lowland forests (4 hours), ➤ Discussion and course credit (1 hour) 	
Field training 5 x 6 hours/day 1 x 5 hours/day <i>(accommodation in the Forest Experimental Station in Krynica)</i>	Silvicultural planning in mountain forests of the FES in Krynica (35 hours)	
Literature	<ul style="list-style-type: none"> - Bernadzki E. Smykała J. 1998. Podział gospodarczy w aspekcie regulacji użytkowania rębego oraz długookresowego planowania hodowlanego, Sylwan 5. - Fabijanowski J. 1963. Planowanie hodowlane w Szwajcarii, Sylwan 2. - Hejmanowski S. 1975. Uprawa topoli. PWRiL Warszawa. - Jaworski A. 1973. Przewodnik do ćwiczeń z hodowli lasu. Topola – Charakterystyka i plantacje. Skrypt AR. - Jaworski A. 2000. Zasady hodowli lasów górskich na podstawach ekologicznych (w:) Poznański R., Jaworski A. Nowoczesne metody 	

	<p>gospodarowania w lasach górskich CILP, Warszawa.</p> <ul style="list-style-type: none"> - Andrzejczyk T., Zybura H. 2012. Sosna zwyczajna. Alternatywne metody hodowli. Seria - drzewa polskich lasów. PWRiL Warszawa - Jaworski A. 2004. Podstawy przyrostowe i ekologiczne odnawiania oraz pielęgnacji drzewostanów. PWRiL, Warszawa. - Jaworski A. 2011. Hodowla lasu. Tom III. Charakterystyka hodowlana drzew i krzewów leśnych. PWRiL Warszawa. - Pach M., Kołodziej Z., Bartkiewicz L., Karczmariski J., Skrzyszewski J. 2010. Plantacje roślin energetycznych. Zakładanie i utrzymanie plantacji. Rośliny drzewiaste. (w:) Frączek J. (red.) Produkcja biomasy na cele energetyczne. PTIR, Kraków, s: 45 – 58. - Paluch J. 2012. Wzrost i produktywność (w:) Skrzyszewski J (red.) Poradnik Leśnika serii Drzewa Polskich Lasów. Buk, Hodowla. 2012. PWRiL Warszawa - Zabielski S. 1998. Plantacyjna uprawa drzew i krzewów szybko rosnących. AR Poznań. - Zasady Hodowli Lasu. 2012. ORWLP w Bedoniu. (the Principle of Silviculture) - Other written information given at the classes.
<p>Assessment method</p>	<p><u>Lectures</u> - written exam.</p> <p><u>Indoor and outdoor exercises:</u></p> <ul style="list-style-type: none"> ➤ Completion of the projects, ➤ Written/oral assessment of the knowledge during the indoor and outdoor exercises, ➤ Skill assessment of computational and analytical task, ➤ Credit report/statement of work/practical exercises (individual and in group).