

Vegetation dynamics

COURSE IDENTIFICATION

CODE	SEM	HT	HP	HA	SCT	PREREQUISITES	COURSE LEVEL OR CATEGORY	RESPONSABLE UNIT
AG100534	Summer	1	1	4	4	Postgraduate inscription	Elective	Postgraduate School

One SCT credit point is equivalent to 25 student learning hours.

COURSE DESCRIPTION

The course is aimed at professionals or applied ecologists who aspire to maintain sustainable and resilient ecosystems in a world in constant change. The course focuses on the study of vegetation dynamics at various spatial and temporal scales, from theoretical and empirical perspectives. We seek that the student acquires theoretical and applied concepts of ecological succession. Through the understanding of the vegetational dynamics, the student will be able to investigate the responses of the ecosystems to global change and the coupling of the atmospheric changes with the changes in the ecosystems. It is hoped that through this inquiry, the student will acquire advanced knowledge and tools that will allow him to predict the response of ecosystems to changes produced by man, climatic changes and natural disturbances. The proper use of these concepts can result in effective ecosystem management practices.

LEARNING STRATEGIES

The course has lectures and fieldwork. It is conducted intensively in the experimental centre at Frutillar (Los Lagos, Chile) where the student can be foculised on the topics discussed with specialists. The course considers field activities, lectures, paper discussions, essays writings, and students presentations.

COURSE COMPETENCIES (Type: B=Basic, G=Generic, E=Specific)

The student:

- Understands and masters the scientific-technical concepts used in vegetational dynamics (E).
- Understands methodologies for studying vegetational dynamics and applies to scientific research questions (E).
- Critically analyzes the scientific literature (G).
- Communicates and discusses information, effectively, with peers (G).

LEARNING RESOURCES

Lectures, computer labs, study cases, scientific debate, field observations, scientific presentations.

COURSE OVERVIEW

Principles and concepts, Successional theories, Niche theory, Path mosaics theory, Ecological resilience, Vegetation responses to environment, Global change uncertainties, Measuring changes in vegetation, Successional models

INSTRUCTORS (List non-exclusive)

<i>Professor</i>	<i>Unit</i>	<i>Main topic</i>
Alvaro G. Gutiérrez	Ciencias Ambientales y Recursos Naturales Renovables. U Chile	Forest dynamics & conservation
Harald Bugmann	ETH - Zurich	Successional models
Loic Pellissier	ETH - Zurich	Niche modelling and species distributions

GRADING

<i>Activities</i>	<i>Percentage</i>
Presentaciones	40%
Ensayo	40%
Participación	20%