

CURSO	:	<b>FIELD METHODS FOR ENQUIRING SOCIAL-ECOLOGICAL SYSTEMS</b>
TRADUCCIÓN	:	MÉTODOS DE CAMPO PARA EL ESTUDIO DE LOS SISTEMAS SOCIO-ECOLÓGICOS
SIGLA	:	VIL626
REQUISITOS	:	NO REQUIREMENTS
RESTRICCIONES	:	AUTHORIZATION BY AU (VILLARRICA CAMPUS)
TIPO	:	FIELDWORK
CALIFICACIÓN	:	STANDARD (FROM 1.0 TO 7.0)
DISCIPLINA	:	FOREST SCIENCES, ANTHROPOLOGY, AGRICULTURAL SCIENCES, SOCIOLOGY, GEOGRAPHY
PALABRAS CLAVE	:	BIODIVERSITY SURVEY, HABITAT SAMPLING, PARTICIPANT OBSERVATION, INTERVIEWS, ENVIRONMENTAL KNOWLEDGE CHANGE

## I. DESCRIPCIÓN DEL CURSO

After finishing this course, the students will understand and articulate methodological approaches from both natural and social sciences. In this co-taught field course, the students will be involved within a real social-ecological setting of southern Chile and experience a combination of lectures, discussions, labs, and field activities. The social and ecological methods examined through the course will help the student to develop an interdisciplinary perspective and research skills relevant to sustainability and environmental conservation.

## II. OBJETIVOS DE APRENDIZAJE

By the end of the term, students should be able to:

- Apply different field methods for studying wildlife species, communities, and their habitats.
- Understand a range of social science methods including standard qualitative and quantitative methods.
- Have a basic knowledge of methods for documenting local environmental knowledge and change.
- Produce and discuss culturally appropriate, ethically-sound, and environmentally sustainable field studies.
- Integrate natural and social science methods to study and address complex issues of environmental management and social-ecological sustainability.

## III. CONTENIDOS

1. The basics
  - 1.1 What, Why and How? Conducting social-ecological research & sampling design
  - 1.2 Navigation and recording data
  - 1.3 Field equipment
  - 1.4 Field ethics: the role of the researcher
  - 1.5 Analyzing contextual data: main social descriptive statistics to understand the context
2. Surveying forest wildlife
  - 2.1 Mammal field techniques
  - 2.2 Avian field techniques
  - 2.3 Amphibian and reptile field techniques
  - 2.4 Invertebrate field techniques

3. Habitat sampling
  - 3.1 Species composition
  - 3.2 Trees and canopy
  - 3.2 Coarse woody debris
  - 3.3 Understory
  - 3.4 Landscape level sampling (introduction to GIS and remote sensing techniques)
4. Participant observation and interviews
  - 4.1 Participant observation in the field: uses, acceptance, taking notes, when to stop
  - 4.2 Qualitative interviews (informal, unstructured, semi-structured, focus groups)
  - 4.2 Structured interviews (questionnaires)
5. Documenting local environmental knowledge and change
  - 5.1 Freelisting
  - 5.2 Identification exercises
  - 5.3 Pile sorts
  - 5.4 Participatory mapping
6. General data processing, analysis, and writing-up

#### IV. METODOLOGÍA PARA EL APRENDIZAJE

- Fieldwork
- Lectures
- Workshop
- Lab activities

#### V. EVALUACIÓN DE APRENDIZAJES

- Participation : 20%
- Natural history field notes : 20%
- Data analysis Project : 20%
- Research proposal\* : 40%

\* The research proposal shall be implemented in the course Planning for Sustainability.

#### VI. BIBLIOGRAFÍA

- Abuquerque UP, Cruz da Cunha LVF, Paiva de Lucena RF, Nóbrega Alves RR. 2014. Methods and techniques in ethnobiology and ethnoecology. Humana Press, New York, U.S.A.
- Altamirano TA, Ibarra JT, Hernández F, Rojas I, Laker J, Bonacic C. 2012. Hábitos de nidificación de las aves del bosque templado andino de Chile. Fondo de Protección Ambiental, Ministerio del Medio Ambiente, Serie Fauna Australis, Pontificia Universidad Católica de Chile, Santiago. Available from <http://www.peregrinefund.org/docs/pdf/research-library/2012/2012-Chile-nidificacion-libro.pdf>.
- Bernard HR. 2005. Research methods in anthropology: qualitative and quantitative approaches, 4th edition. Altamira Press, Oxford, U.K.
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- Bird DM, Bildstein KL. 2007. Raptor research and management techniques. Page Ambio. Surrey, Canada. Available from <http://www.ncbi.nlm.nih.gov/pubmed/21071439>.
- Caviedes J, Ibarra JT. 2017. Influence of anthropogenic disturbances on stand structural complexity in Andean temperate forests: implications for managing key habitat for biodiversity. PLoS ONE **12**:e0169450.
- Celis-Diez J, Ippi S, Charrier A, Garín C. 2011. Fauna de los bosques templados de Chile.
- Feinsinger P. 2001. Designing field studies for biodiversity conservation. Island Press, Washington, D.C., U.S.A.
- Green RH. 1979. Sampling design and statistical methods for environmental biologists. John Wiley & Sons, New York, U.S.A.
- Newing H. 2011. Conducting research in conservation: a social science perspective. Page Igarss 2014. Routledge, New York, U.S.A.
- Newton AC. 2007. Forest ecology and conservation: a handbook of techniques. Oxford University Press, Oxford, U.K.
- Uddin N. 2011. Decolonising ethnography in the field: an anthropological account. International Journal of Social Research Methodology **14**:455–467.

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## ANEXO

Áreas disciplinarias: Especificar para cada uno de los cursos de pregrado

- Administración
- Agronomía / Ciencias de la Agricultura
- Antropología
- Antropología Filosófica (A-E)
- Arquitectura
- Arte
- Astrofísica
- Astronomía
- Biología
- Biología Marina
- Bioquímica
- Ciencias Biológicas
- Ciencia Política
- Comunicación
- Construcción Civil
- Deportes
- Derecho
- Dirección Audiovisual
- Diseño
- Economía
- Educación
- Enfermería
- Estadística
- Estética
- Estudios Urbanos / Urbanismo
- Farmacia
- Filosofía
- Física
- Fonoaudiología
- Geografía
- Historia
- Ingeniería
- Ingeniería Forestal / Ciencias Forestales
- Kinesiología
- Letras
- Lingüística
- Literatura
- Matemáticas
- Medicina
- Música
- Nutrición
- Odontología
- Periodismo
- Planificación Urbana
- Psicología
- Psicología del Aprendizaje
- Psicología del Desarrollo
- Publicidad
- Sociología
- Química
- Química y Farmacia
- Teatro / Actuación
- Teología
- Trabajo Social