

**INTEGRATIVE ECOLOGY
OF THE CENTRAL
ANDES
2024-2**

I. INFORMACIÓN GENERAL

CURSO	INTEGRATIVE ECOLOGY OF THE CENTRAL ANDES
CLAVE	ING309
CRÉDITOS	3
HORAS DE DICTADO	CLASE: 3 Semanal EXAMEN:
HORARIO	TODOS
PROFESORES	KARIN BARTL - FERNANDO LUIS GONZALEZ HUNT

II. PLANES CURRICULARES DONDE SE DICTA EL CURSO

ESPECIALIDAD	ETAPA	NIVEL	CARÁCTER	REQUISITOS
INGENIERÍA DE MINAS	PREGRADO EN FACULTAD	0	ELECTIVO	Cred.en Especialidad : 140.00
INGENIERÍA GEOLÓGICA	PREGRADO EN FACULTAD	0	ELECTIVO	Cred.en Especialidad : 140.00

Tipos de requisito

- 04 = Haber cursado o cursar simultáneamente
- 05 = Haber aprobado o cursar simultáneamente
- 06 = Promedio de notas no menor de 08
- 07 = Haber aprobado el curso

III. DESCRIPCIÓN DEL CURSO

The central segment of western South America comprises Peru and the north of Chile and Bolivia. The region is home to dramatic altitudinal and climatic transitions which contribute to its unique biology, high biodiversity and the high degree of endemism among the species present. The course will provide the basic concepts behind ecological theory and then proceed to review current research topics on ecosystem function, biodiversity and the human dimension in the region covering the transition from the Pacific Ocean over the Andes and into the Amazon rainforest. A special emphasis will be placed on species interactions and their role in ecosystem services, the current and past anthropogenic influence on these ecosystems and potential biological effects of the human-mediated breakdown in the geographical barrier between east and west in central South America

IV. SUMILLA

The central segment of western South America comprises Peru and the north of Chile and Bolivia. The region is home to dramatic altitudinal and climatic transitions which contribute to its unique biology, high biodiversity and a high degree of endemism among the species present. The course will review current research topics on ecosystem function, biodiversity and the human dimension in the transition from the Pacific Ocean over the Andes and into the Amazon rainforest. A special emphasis will be placed on species interactions and their role in ecosystem services, the current and past effect of humans on these ecosystems and potential biological effects of the human-mediated breakdown in the geographical barrier between east and west in central South America.

V. OBJETIVOS

The course intends to give students an overview of the physical and biological scenario that has shaped human activity in the central Andes and western Amazon and provide a technical basis for discussion of the challenges for sustainable development in the region.

VI. PROGRAMA ANALÍTICO

SESIÓN 1	A BASIC ECOLOGY TOOLBOX (6 horas)
SESIÓN 2	2. BIOGEOGRAPHY AND LANDSCAPE ECOLOGY (6 horas)
SESIÓN 3	3. EARTH AND CLIMATE SYSTEM (3 horas)
SESIÓN 4	4. ECOSYSTEMS AT WORK (9 horas)
SESIÓN 5	5. THE HUMAN IMPACT: FROM SPECIES TO ECOSYSTEMS (9 horas)
SESIÓN 6	6. GLOBAL CLIMATE CHANGE: IMPACTS, RISKS AND FUTURE ADAPTATION (6 horas)

VII. METODOLOGÍA

The course will consist of a combination of lectures, presentations of selected literature and discussion sessions. Formal lectures will provide the basic theoretical information on each major topic after which a discussion round will be performed based on current relevant literature.

VIII. EVALUACIÓN

Sistema de evaluación

Nº	Codigo	Tipo de Evaluación	Cant. Eval.	Forma de aplicar los pesos	Pesos	Cant. Eval. Eliminables	Consideraciones adicionales	Observaciones
1	Nf	Nota Unica	1	Por Promedio	Nf=1	0		

Modalidad de evaluación: 4

Fórmula para el cálculo de la nota final

$$(1Nf) / 1$$

Aproximación de los promedios parciales No definido

Aproximación de la nota final No definido

IX. BIBLIOGRAFÍA

Referencia obligatoria

- Libro
IPCC
2013
Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.
Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Libro
IPCC

2014

Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

- Libro

Miller, G., & S. Spoolmann

2012

Environmental science

Brooks/Cole Cengage Learning, Belmont, USA.

452 pp.

- Libro

Perú. Ministerio de Agricultura. Autoridad Nacional del Agua.

2012

Recursos hídricos en el Perú

Lima : BID : Autoridad Nacional del Agua, 2012.

http://caliope.pucp.edu.pe/uhtbin/cgisirsi/x/0/x/5?searchdata1=524350+%7bckey%7d&user_id=webserver

- Libro

Smith, T.M & R. L. Smith

2006

Elements of Ecology

Pearson/Benjamin Cummings

658 pp.

- Libro

Tarback, Edward J.

2010

Ciencias de la tierra : una introducción a la geología física

Madrid [etc.] : Pearson Educación Prentice Hall : UNED, D. L. 2010.

http://caliope.pucp.edu.pe/uhtbin/cgisirsi/x/0/x/5?searchdata1=536158+%7bckey%7d&user_id=webserver

- Artículo / Journal

Selected articles from the current scientific literature

X. POLÍTICA CONTRA EL PLAGIO

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www.pucp.edu.pe/documento/pucp/plagio.pdf