FACULTAD DE CIENCIAS E INGENIERÍA

INTEGRATIVE ECOLOGY OF THE CENTRAL ANDES

2020-1

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 simultaneamente

05 = Haber aprobado o cursar simultaneamente

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)**

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SESIÓN 2 **2. BIOGEOGRAPHY AND LANDSCAPE ECOLOGY (6 horas)**

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SESIÓN 3 **3. EARTH AND CLIMATE SYSTEM (3 horas)**

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SESIÓN 4 **4. ECOSYSTEMS AT WORK (9 horas)**

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SESIÓN 5 **5. THE HUMAN IMPACT: FROM SPECIES TO ECOSYSTEMS (9 horas)**

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SESIÓN 6 **6. GLOBAL CLIMATE CHANGE: IMPACTS, RISKS AND FUTURE ADAPTATION (6 horas)**

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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

N°	Codigo	Tipo de Evaluación	Cant. Eval.	Forma de aplicar los pesos	Pesos	Cant. Eval. Eliminables	Consideraciones adicionales	Observaciones
1	Ta	Tarea académica	1	Por Evaluación	Ta1=5			
2	Ex	Examen	2	Por Evaluación	Ex1=2 Ex2=3			

Fórmula para el cálculo de la nota final

(5Ta1 + 2Ex1 + 3Ex2) / 10

Aproximación de la nota final No definido

Consideraciones adicionales

Se aplica la modalidad de evaluación 1.

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
  Tarbuck, 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

Para la corrección y evaluación de todos los trabajos del curso se va a tomar en cuenta el debido respeto a los derechos de autor, castigando severamente cualquier indicio de plagio con la nota CERO (00). Estas medidas serán independientes del proceso administrativo de sanción que la facultad estime conveniente de acuerdo a cada caso en particular. Para obtener más información, referirse a los siguientes sitios en internet

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