EARTH AND LIFE HISTORY OF COSTA RICA

new cluster course for:
- Global Environmental Change Cluster
- Latin American Studies Cluster

Proposing Faculty:
Martin J. Streck, Geology
Richard Peterson, Biology

1. COURSE DESCRIPTION

This is a combined lecture and fieldtrip class in which geological and biological concepts are explored via understanding the earth history of Costa Rica. It is designed for students to understand the dynamics of natural processes and their interdependencies as it is recorded by the case history of Costa Rica. Costa Rica constitutes with Nicaragua and Panama the volcanic land mass originating ninety million years ago that later moved into place to create the North and South America land bridge. Volcanic and tectonic phenomena are instrumental in shaping the country and its biodiversity. Costa Rica's history is intimately tied to the origin and evolution of the Galapagos Islands and is a textbook example for biological and physical evolution of the Earth. Lecture will cover topics including plate tectonic evolution, paleontological developments at the break from dinosaurs to mammals, volcanoes and their importance in shaping the landscape. Fieldtrip will give students hands-on experience.

A. DEVELOPMENT

This is a new course in development

B. AVAILABILITY

It is planned that this course will be offered every 2 years during Winter term alternating with G399U, Geology and History of Hawaii.

C. PREREQUISITES

Prerequisites will be one of the following: G201/204, G202/205, Bi251, Bi252, Bi253, Ch221, Ch222, Ch223, Geog210, Ph201, Ph202, Ph203, Mth 241, Mth251, Mth252, Mth253, Mth254 or one equivalent Sophomore Inquiry class

2. COURSE OUTLINE

Topical Outline: 1-50 minute lectures/discussion per week for winter term
Snapshot of today's Costa Rica: Land, People and Culture.
Costa Rica in the makings: Plate tectonic processes, Earth Interior, Geological timescale,
Life of the Past: Paleontological principles, development of species, fossils as evolution markers
Crucibles of change: Volcanoes in Costa Rica

Spring Break: Nine day field trip to Costa Rica to visit geological, biological and cultural sites.
D. SUSTAINABILITY

The proposed cluster course is according to learning goals of the Global Environmental Change Cluster. Integrating this class also into the Latin American Studies Cluster will enhance the science within the cluster using one Latin American country as a "case study". It therefore suits this cluster as well.

The course will be offered as a customized course during alternate years. Management of student fees for the course will be through the Department of Geology.

COURSE APPROVED FOR CLUSTER INCLUSION BY:

DEPARTMENT CHAIR(S)  

DATE: 11/6/10

CLUSTER COORDINATOR  

DATE: 11/4/10

CHAIR, CLUSTER COORDINATORS  

DATE: 

CHAIR, UNST COMMITTEE  

DATE: 