

## COURSE DETAIL

### HUMAN ADAPTIVE INTERACTIONS TO CHANGING ENVIRONMENT

**Country**

Italy

**Host Institution**

University of Bologna

**Program(s)**

University of Bologna

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Environmental Studies Biological Sciences

**UCEAP Course Number**

170

**UCEAP Course Suffix****UCEAP Official Title**

HUMAN ADAPTIVE INTERACTIONS TO CHANGING ENVIRONMENT

**UCEAP Transcript Title**

HUMN ADAPT INTERACT

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## **Course Description**

This course is part of the Laurea Magistrale program in Sciences and Management of Nature. The course is intended for advanced level students only. Enrollment is by permission of the instructor. The course focuses on the distribution of human biodiversity in the world and on the main adaptive processes that have influenced it through patterns of phenotypic and molecular variation in human populations. The course explores how the different and changing environments have prompted ecological and cultural shifts that have introduced new selective pressures that have impacted the human genome. Special attention is placed on cases in which ecological and cultural contexts have changed so rapidly in the modern era that they have trigger adaptive traits that were previously shaped by natural selection and now are shaped by maladaptive selection. The course also provides elements useful for understanding the evolutionary causes of differential susceptibilities to complex diseases in human populations. The course presents the main theoretical models developed so far to describe the processes by which human populations have biologically adapted to a variety of environmental conditions. Moreover, it describes patterns of molecular and phenotypic variation that underlie some of the most well-studied human adaptive traits. Finally, evidence supporting dis-adaptive processes undergone by present-day human populations due to rapid changes occurred in their environmental and/or cultural contexts is presented. The course is organized as follows: evolutionary principles, processes enabling human biological adaptation to environmental settings, contextualization of human adaptive traits in the overall landscape of human biodiversity, case studies describing adaptive processes of human populations in response to environmental stresses, and case studies describing dis-adaptive processes of human populations due to rapid environmental/cultural changes.

## **Language(s) of Instruction**

English

## **Host Institution Course Number**

88266

**Host Institution Course Title**

HUMAN ADAPTIVE INTERACTIONS TO CHANGING ENVIRONMENT

**Host Institution Campus**

BOLOGNA

**Host Institution Faculty****Host Institution Degree**

LM in SCIENCES AND MANAGEMENT OF NATURE

**Host Institution Department**

BIOLOGICAL, GEOLOGICAL, AND ENVIRONMENTAL SCIENCES

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