

Behavioral Genetics

Optional PhD course, 7.5 credits

Syllabus

Course goal

The course aims at introducing basic theories and concepts in human genetics as well as basic methods in behavioral genetics. Following the course, students will be able to identify key theoretical issues in the genetics of human behavior, to critically examine empirical data on the genetic aspects of various human traits, and to discuss behavioral genetics from an evolutionary perspective.

Course content

The course will be divided into 3 sections covering genetics individual differences and evolutionary psychology.

Part 1: Genetics

This section of the course will introduce the student to the science of genetics. Topics include molecular genetics, Mendelian genetics, metabolic disorders, chromosomal disorders, linkage and association designs, and the genetics of complex disorders. The goal of this section is to appreciate the numerous ways and mechanisms in which genes can influence behavior and social influences can influence gene expression.

Part 2: Individual Differences

Why are some people shy while other people are very outgoing? Why do some people do well at school while others struggle just to pass? This section of the course examines the roles that genes play in creating individual differences among us humans. Topics include overviews of the twin and adoption designs, the genetics of personality, the genetics of cognitive ability, and the genetics of psychopathology. This part will also cover genetic influences on brain function and the role of epigenetics for human behavior.

Part 3: Evolution and Evolutionary Psychology

This section of the course examines behavior from the perspective of evolution. Topics include population genetics and the principles of evolution, biological constraints on behavior, human behavioral adaptations, and mate preferences. The major goal of this section is to appreciate how millions of years of mammalian and primate evolution contributes to many different aspects of our behavior today.

Lectures

Lectures may be given in English or Swedish.

Literature

Plomin, R., DeFries, J. C., Knopik, V. S., & Neiderhiser, J. M. (Eds.). (2013). Behavioral genetics. New York, New York: Worth Publishers. 500 pp.

Selected articles. 100 pp.

Examination

Oral and written assignments.