COURSE DETAIL

EVOLUTIONARY GENETICS
Country Ireland
Host Institution Trinity College Dublin
Program(s) Trinity College Dublin
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 103
UCEAP Course Suffix
UCEAP Official Title EVOLUTIONARY GENETICS
UCEAP Transcript Title EVOLUTINRY GENETICS
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description
This course provides an introduction to genetic variation - its origins and its evolutionary consequences. The information in DNA is not always transmitted accurately from one generation to the next. DNA sequences can change spontaneously by the process of mutation and inaccurate DNA repair, resulting in genetic variation (polymorphism) within populations. Variable sites at different positions in the genome get shuffled into new combinations by the process of genetic recombination that occurs during sexual reproduction. Whether a particular variant (allele) survives for a long time in a population or goes extinct depends on the evolutionary forces acting on the population. If a new allele is advantageous to the population, Darwinian natural selection will tend to increase its frequency in the population; alternatively, if the new allele is disadvantageous natural selection will tend to eliminate it. However, if the population is small, random events (genetic drift) can overcome the power of natural selection.

Language(s) of Instruction
English

Host Institution Course Number
GEU33006

Host Institution Course Title
EVOLUTIONARY GENETICS

Host Institution Campus
Trinity College Dublin

Host Institution Faculty

Host Institution Degree

Host Institution Department
Genetics

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