COURSE DETAIL

APPLIED BIOINFORMATICS
Country Sweden
Host Institution Lund University
Program(s) Lund University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 158
UCEAP Course Suffix
UCEAP Official Title APPLIED BIOINFORMATICS
UCEAP Transcript Title APPL BIOINFORMATICS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

Major technological advances in affordable nucleic acid sequencing have allowed for an explosion of sequencing data and molecular tools available for researchers in biological sciences. This provides the opportunity for ecologists, evolutionary biologists, and molecular biologists to incorporate bioinformatic analyses into their existing research program to approach their research questions from an interdisciplinary angle. This course provides a general understanding of several major bioinformatics concepts and tools commonly used in biology and molecular biology. Basic knowledge and practice in designing and executing bioinformatics procedures aimed at answering scientific questions in the fields mentioned above are gained. More specifically, the course gives an overview of the most commonly used methods within applied bioinformatics within the fields of biology and molecular biology. Areas covered include sequence databases, pairwise and multiple sequence alignment, homology searches in sequence databases, and subcellular localization prediction. Several downstream analyses are performed and their utility in applied ecology, evolutionary biology, and molecular biology research are discussed with guest speakers. An overview of the algorithms and statistics behind the bioinformatics methods is included, but the primary focus of course is on applicability, not on methodological details.

Language(s) of Instruction
English

Host Institution Course Number
BIOR93

Host Institution Course Title
APPLIED BIOINFORMATICS

Host Institution Course Details
https://www.biologyeducation.lu.se/education/courses/advanced-level-courses/app...

Host Institution Campus

Lund

Host Institution Faculty
Science

Host Institution Degree

Host Institution Department

Course Last Reviewed
2022-2023

Print