

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

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