

# COURSE DETAIL

## ALGORITHMS FOR ANALYZING BIOLOGICAL SEQUENCES

**Country**

Taiwan

**Host Institution**

National Taiwan University

**Program(s)**

National Taiwan University

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

128

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

ALGORITHMS FOR ANALYZING BIOLOGICAL SEQUENCES

**UCEAP Transcript Title**

ALGORITHMS FOR BIOL

**UCEAP Quarter Units**

4.50

**UCEAP Semester Units**

3.00

## Course Description

This course introduces biological sequence analysis methods. The course provides familiarity with the vast amounts of biomedical and genomic data and online tools. The first part of the course explores basic algorithmic strategies, sequence alignment, chaining algorithms, and genomics. If time allows, Hidden Markov models (the Viterbi algorithm) are discussed. The second part covers sequence assembly, max-sum/max-density segments, data analysis, and more techniques used in genomics analysis.

## Language(s) of Instruction

English

## Host Institution Course Number

CSIE5028

## Host Institution Course Title

ALGORITHMS FOR ANALYZING BIOLOGICAL SEQUENCES

## Host Institution Course Details

[https://nol.ntu.edu.tw/nol/coursesearch/print\\_table.php?course\\_id=922%20U0290&c...](https://nol.ntu.edu.tw/nol/coursesearch/print_table.php?course_id=922%20U0290&c...)

## Host Institution Campus

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Computer Science and Information Engineering

## Course Last Reviewed

2022-2023

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