

Global Learning Semesters

Course Syllabus

Course: BIOL-475 Bioinformatics

Department: Biomedical Sciences

Host Institution: University of Nicosia, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
BIOL-475	Bioinformatics	3
Semester Offered	Contact Hours	Prerequisites
Fall, Spring	56	BIOL-225, BIOL-390A
Department	Level of Course	Language of Instruction
Biomedical Sciences	Upper Division	English

Course Description

Basic practical techniques of bioinformatics and the mathematical and statistical ideas which underlie these techniques, as well as the computational algorithms and theory used in bioinformatics programs. By the end of the course students will become familiar with a variety of bioinformatics software, and should be able to understand the programming processes used and how these apply to bioscience research problems.

Instructor

Drs. Stavros Pouloukas & Jan Ritcher

Course Aims and Objectives

To introduce students to the basic practical techniques of bioinformatics. To understand the basis and logic of bioinformatics computational algorithms.

Teaching Methods

The course is delivered through a mixture of lectures aided by means of transparencies, and by a weekly tutorial.

Course Teaching Hours

56 hours (42 hours lectures + 14 hours tutorials)

Evaluation and Grading

Tutorial Exercises: 15-20%
Tests: 40-50%
Final Exam: 40%

Readings and Resources

Required Textbooks

Bioinformatics: Sequence and Genome Analysis, David Mount, Cold Spring Harbor Laboratory, 2001.

Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins, 2/e, Andreas D. Baxevaris (Editor), B.F. Francis Ouellette and Andreas D. Baxevaris, 2001, Wiley-Liss

Algorithms on Strings, Trees and Sequences: Computer Science and Computational Biology, D.

Gusfield, 1/e, Cambridge University Press, 1997

Recommended Reading

Developing Bioinformatics Computer Skills, Cynthia Gibas, Per Jambeck, O'Reilly and Associates, 2001.