

**ORT Braude College of Engineering  
Department of Biotechnology Engineering**

**Course Syllabus  
Bioinformatics**

**Course Number:** 41196

**Lecturer:** Eran Bosis

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**Office Location:** D-217

**Office Hours:** By appointment.

**Weekly Meetings:** Lecture: 2 hours, Exercise 1 hour

**Prerequisites:** Molecular Biology and introduction to Genetic Engineering (41161).

**Requirements:**

A) Class attendance is expected. Failure to attend at least 80% of the total class hours will result in reduction of 10 points from the final grade.

B) Submission of home exercises on time is expected. Failure to submit on time at least 80% of the home exercises will result in reduction of 10 points from the final grade.

**Grade:** 100% Final examination. A bonus of up to 5 points will be given for students presenting a paper, preparing a tutorial or performing a mini-project. The topics covered by the students will be part of the material for the final examination. More details will be given in the first class.

**Topics:**

Introduction to Bioinformatics, Access to Information, Pairwise alignment, BLAST, Multiple sequence alignment (MSA), Molecular phylogeny and evolution, the eukaryotic chromosome, DNA and RNA analysis, Proteomics, and Protein structure.

**Course Text Book:**

Pevsner J, Bioinformatics and Functional Genomics, 3<sup>rd</sup> ed. Wiley-Blackwell, 2015.

Updated: February 25<sup>th</sup>, 2019.