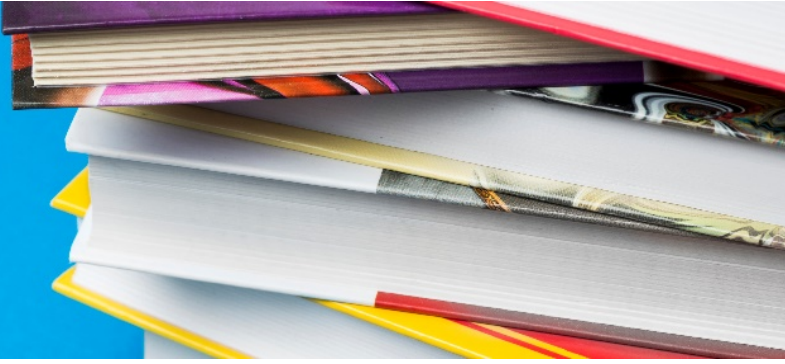
TEL AVIV UNIVERSITY אוניברסיטת תל אביב

Full Syllabus



Course Title

Microbial Genetics

Lecturer

Prof. A.A. Herskovits, Prof. U. Gophna

Semester

A- Winter

Course requirements

Two exams: Mid-term exam on Uri's part, and then another exam on Anat's part at the end of the course

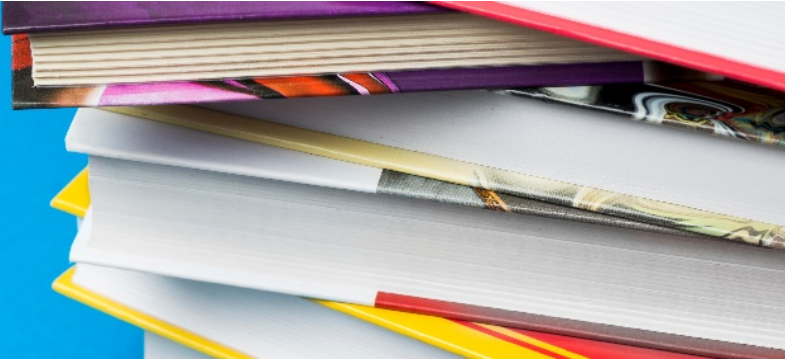
Final grade components

Two short 50% exams one in mid-semester

Course schedule

Class no. / Date	Subject and Requirements (assignments, reading materials, tasks, etc.)
1	Introduction, microbial genomes
2	Genome properties and optimization in bacteria
3	Evolutionary forces shaping bacterial genes and genomes
4	Genome organization, strand biases origins of replication
5	Sequence-based metagenomics
6	Functional metagenomics
7	Mobile elements, Conjugative elements
8	Integrons, mobile genomic islands, GTAs
9	Anti-phage defenses; CRISPR-Cas systems
10	Anti-defense genes
11	Newly discovered defense systems
12	Inteins
13	Review (pre-midterm)
14	Free Thursday before the mid-term exam (Part I)
15	Introduction: regulation of gene expression
16	Introduction: regulation of gene expression
17	General stress responses: stringent, heat
18	The SOS response

Full Syllabus



19	Extra-cytoplasmic stress
20	Bacteriophages
21	Phages as regulatory switches
22	Microbial Cooperation
23	Quorum Sensing I
24	Quorum Sensing II
25	Protein translocation and secretion
26	Exam Part II- in the class

Required course reading

no

Optional course reading

Papers provided in the course

Comments