Course 76557

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Participance in the course is limited to MSc and PhD students. Strong background in molecular and cellular biology is required.

Biology has been transformed by high-throughput technologies (genomics, proteomics, metabolomics, etc.), which in turn have led to a large number of massive databases and software analysis packages. This course focuses on the "omics" technologies, on the resulting databases and on the computational and analytical tools to analyze the data. The essence of the class is to develop a critical view on the gap from the technological part to the interpretation of biological processes.

We will cover sample of classical and modern technologies for screening cell properties via sequencing, proteomics and imaging techniques. Topics will include survey on most modern high- throughput approaches, with an emphasis on the limitation and capacity of each.

Students will also be expected to read original papers specified as references for the class and for seminar presentations. Students will present selected papers with critical approach for the data and the analysis.