

Teaching

Summary of the course **Scientific Writing and Presentation**

YouTube Video: [YouTube.com/watch?v=ZhV62JurBIA](https://www.youtube.com/watch?v=ZhV62JurBIA)

Course description

The objective of this course is to teach students how to write a paper, an abstract in English for publication in a scientific journal and to teach students the oral presentation and poster presentation skills needed to present their results at international scientific conferences. Moreover, the students will learn how to communicate with editors and reviewers of the journals. The course includes both lectures and tutorials with a number of in-class writing exercises and discussion of good and not-so-good writing practices. The tutor will particularly emphasize graphical organization, drafting and finalizing research publication figures and posters. The course will finish with an in-class poster presentation with oral discussion. Students who complete this course will learn what to do to get their research published and how best to present their work at a scientific conference.

Distribution of content

Content

Hours

Warm up and introduction to the writing course. Grammar, punctuation, linguistics of scientific text. Analysis and troubleshooting.
2

Structure of the scientific paper. Principles of text fractalization.
2

Choosing the journal for publication, article types. Predatory publishing houses and journals.
2

Most common mistakes in writing and creating graphical items.
4

Communication with reviewers and editors. Writing a cover letter.
2

Practical exercises and in-class analyses of abstracts, figures and posters.
16

Scientific presentation practice. In-class poster presentation and discussions.
4

Summary of the course **Application of Viral Techniques and Introduction to Molecular Virology**

YouTube Video: [YouTube.com/watch?v=yz5yUCrrFeE](https://www.youtube.com/watch?v=yz5yUCrrFeE)

Course description

This course involves a comprehensive overview of replication, integration and transcription mechanisms both RNA- and DNA-containing viruses of prokaryotes and eukaryotes. It is therefore primarily intended for undergraduate or graduate students already familiar with basic molecular biology. The lectures will focus on regulatory molecular biology mechanisms in order to give the students a broad overview as well as aid them to understand deeper signaling pathway interactions, solve genetic problems and ideate their future projects. This course may meet the needs of advanced undergraduate students with interests in molecular biology and virology. At the same time, it may serve as a refresher course in molecular biology for graduate students willing to explore replication and transcription regulation from different, often extreme angles which in viruses often go beyond basic mechanisms. Furthermore, this course provides a comparative analysis of viral applications in modern biotechnology, neuroscience and medicine which could be useful for students interested in these subjects. This is a typical lecture course in which topics are narrated by the instructor.

Distribution of content

Content

Hours

Introduction: basic, comparative and evolutionary virology, viral life cycle and medical aspects associated with infections.

2

Replication of DNA-containing viruses with a linear genome.

4

Replication of DNA-containing viruses with a circular genome.

4

Transcription of DNA-containing viruses.

4

Replication and transcription of reverse-transcriptase-containing viruses.

4

Replication and transcription of RNA-containing viruses.

6

Application of viral techniques in biotechnology, neuroscience and medicine

6

Concluding remarks and systematic review.

2