
Scientific writing and effective speaking for PhD students

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The main aim of course is to learn how to express your own ideas and discuss those of others in writing and speaking. Writing for peer-reviewed publication and public speaking are one of the most important skills that young scientists and engineers should possess during PhD studies. However, many scientists and engineers do not consider themselves good writers or speakers, so how can the average scientist write a good scientific paper or give an outstanding speech? The good news is you do not have to be a good writer to write a good science paper, but you do have to be a careful writer. And while the creativity that often marks good science will sometimes spill over into the writing about that science, in general, good science writing does not require creative writing. In particular, writing for a peer-reviewed science or engineering journal requires learning and executing a specific formula for presenting scientific work. Thus, I would like to present useful tips how to prepare a good scientific paper. And on the other hand, show an effective way to give an interesting speech. The course includes:

1. Introduction to scientific writing
 - 1.1 why write and publish a paper?
 - 1.2 the literature search
 - 1.3 plan and execute research with publication in mind
 - 1.4 what an editor looks for?
2. Structure and organization of a scientific paper
 - 2.1 the standard structure of a scientific paper
 - 2.2 abstract
 - 2.3 introduction
 - 2.3 methods
 - 2.4 results and discussion
 - 2.5 conclusions
3. Proper presentation of figures and tables
 - 3.1 the goals of using figures
 - 3.2 errors in graphs
 - 3.3 graphical integrity
4. Working on your own paper – project
5. How to effectively deliver your speech into particular audience – ending with your own presentation

The Scientific writing and effective speaking course will start with lectures and end with a personalized project and presentation. During the project time, students will join 1:1 consultations with tutor. The course will enable students to:

- identify the main issues related to the scientific writing,
- identify the structure of paper,
- improve their writing skills,
- work on their own paper independently in more efficient way,
- enhance their public speaking skills.

Lecture hours: 10 hours, workshops: 10 hours, self-teaching: 10 hours, direct tutoring and 1:1 consultations: 20 hours. Total: 50 hours.

ECTS: 2