



COURSE DESCRIPTOR

Scientific Communication I and II
Forskningskommunikation I och II
Third-cycle course
2 higher education credits

1. Entry requirements

Admission to a doctoral or licentiate program. No previous knowledge required.

2. Objective and content

2.1. Objective

The main objective of the course is to teach the candidates to communicate scientific ideas and results both in academic audiences and to the public in general. The first part of the course (Scientific Communication I) will focus on the popular science format, while the second part (Scientific Communication II) will focus on the academic format. The course will give practical experience with presenting own ideas, as well as receiving feedback and critically reviewing others work.

2.2. Content

The course will be organized around a set of seminars and workshops with candidate presentations.

Scientific Communication I – Popular science presentations

- Seminar 1:
 - Public understanding of science and dialog with society.
 - Formats and style. Storytelling. Popular science magazine articles and general press.
- Seminar 2:
 - Presenting research ideas and results to public.
 - Formats and style. Elevator pitches, TED talks.
- PhD Workshop
 - Candidates prepare a presentation of their ideas and results and give a presentation in an annual PhD workshop

Scientific Communication I – Academic presentations

- Seminar 1:
 - Communicating scientific ideas and research to an academic audience. Format and style.
- Seminar 2:
 - Scientific reviews. Providing and receiving constructive feedback.
- PhD Workshop
 - Candidates prepare an extended abstract of their ideas and results and give a presentation in an annual PhD workshop

3. Learning outcomes

The course targets one of the goals of doctoral education, namely, the ability of the candidates to present and discuss research and research findings authoritatively in speech and writing and in dialogue with the academic community and society in general. The following learning outcomes are examined in the course.



3.1. Knowledge and understanding

On completion of the course, the student will be able to:

- Effective communication of research ideas and results

3.2. Competence and skills

On completion of the course, the student will be able to:

- Selecting the style and format of presentation appropriate for the chosen audience
- Providing constructive feedback, using Easy-Chair system
- Presenting and discussing research ideas and results.

3.3. Judgement and approach

On completion of the course, the candidate will be able to:

- Critically review, discuss and argue about the quality of research works.
- Present and discuss research ideas and results in speech and writing and in dialogue with the academic community and public in general.

4. Learning activities

The course is organized around a set of seminars preparing the students to present their ideas and results in an annual PhD workshop. The students are expected to

- Participate in all seminars and actively engage in discussions;
- Submit and present two assignments (two presentations and one extended abstract) in two annual PhD workshop instances (one submission directed towards public audience and one towards academic audience);
- Review peers' extended abstracts (complete 2-3 reviews);

The course will run yearly with the popular science part (I) and scientific part (II) organized interchangeably. Teaching language and materials will be in English.

5. Assessment and grading

Modes of examinations for the course:

Code	Module	Credit	Grade
XXX	Communication I	I credit	GU
	Active participation in seminars	–	GU
	Popular-science presentation	–	GU
XXX	Communication II	I credit	GU
	Active participation in seminars	–	GU
	Extended abstract submission	–	GU
	Peer-reviews	–	GU
	Scientific presentation	–	GU
	Total:	2 credits	

The students are free to select only one part, if desirable, and receive I credit.

6. Course evaluation

The course coordinator is responsible for systematically gathering feedback from the students in course evaluations and making sure that the results of these feed back into the development of the course.



7. Restrictions regarding degree

No restrictions.

8. Course literature and other materials of instruction

- Presentation:
 - Carrada G. (2006), Communicating Science: A scientist's survival kit. European Commission – Europa. Available online: <https://op.europa.eu/en/publication-detail/-/publication/1117e636-c60e-4241-9c1e-9aaef5a59bd/language-en>
 - Duarte N. (2008), Slide:ology, The Art and Science of Creating Great Presentations
 - McCandless D. (2009), Information is beautiful.
 - McCandless D. (2014), Knoweldge is beautiful
 - Palaoglu, Ö. (2002), The art of scientific presentation. In *Research and Publishing in Neurosurgery* (pp. 105-108). Springer, Vienna.
 - Greve, R. (2014), How to give a great scientific presentation.
 - Collins, J. (2004), Education techniques for lifelong learning: giving a PowerPoint presentation: the art of communicating effectively. *Radiographics*, 24(4), 1185-1192.
- Reviews:
 - How to Read a Paper by S. Keshav.
 - How to Read a Research Paper by Michael Mitzenmacher and Norman Ramsey
 - Writing Reviews for Systems Conferences by Timothy Roscoe.
 - How to get your papers accepted by Matt Welsh.

9. Language of instruction

The teaching language is English.