SYLLABUS

General information about the course

Course title

Advanced Research Communication.

Unit name

Institute of Nature Conservation Polish Academy of Science.

Form of study

Full-time.

Type of course, number of hours

Lectures 10 hours, workshops 20 hours per semester.

Course type

Compulsory classes.

Year and semester

Summer semester 2025/2026.

Coordinator

Dr hab. Agnieszka Bednarska.

Teaching person

Prof. dr hab. Ryszard Laskowski (Jagiellonian University)

Prof. dr hab. Marcin Czarnołęski (Jagiellonian University)

Dr hab. Agnieszka Bednarska (INC PAS).

Aim of the course

Gaining knowledge on the communication of research to scientific community in the form of oral presentation, posters and publications.

Prerequisites/Requirements

None.

Learning outcomes

Knowledge

Student knows how to:

- search for scientific information, evaluate sources, select and integrate information;
- write scientific manuscript at the level acceptable in the best international journals;
- evaluate scientific quality of others' research;
- effectively communicate scientific information to the community, using appropriate platforms;
- participate actively in scientific discussions.

Skills

Student is able to:

- communicate his/her research to scientific community as oral presentations, posters, and research and review papers;
- prepare a manuscript, submit it to an appropriate high rank scientific journal, and accept criticism from peers in a constructive way;
- participate actively in the peer review system: can assess the quality of research and a manuscript or grant proposal, can communicate his opinion in a polite and constructive manner;
- communicate science to public through popular lectures and articles, active participation in public discussions, and consultancy.

Social competences

- student understands that science is based on full honesty and transparency, hence when doing research and communicating its results, all details have to be specified in a way that is clear and detailed enough to let others repeat exactly the same study;
- student is ready to accept comments, including criticism, in a constructive way, and understands that this is the best tool to improve his/her scholarly work;
- student understands the need to share his/her research results with general public and the role of this process in the educational and financing systems
- student understands and accepts that an important part of scientific approach is dissemination of her/his research results and exposition of them to falsification tests;
- student perceives other scientists as partners in discussion, even if they represent different fields of science;

- student understands that even strong criticism should be always expressed in a polite and constructive manner.

Program content

The lectures will familiarize PhD students with the most important issues in writing scientific articles, making oral and poster conference presentations, and reviewing others work. Examples of well and purely done work will be presented and discussed with PhD students to pinpoint most important and common mistakes, and to learn the principles of good writing and presenting the work.

During workshops PhD students will learn how to search and evaluate scientific information, and how to communicate science to the public; PhD students will be interviewed about different topics related to their specialties, but also to issues of more general interest.

Each PhD student will submit a short research article and a review of a manuscript. This will require effective use of the skills learned in the first part of the course: information search, its verification, and summarizing the acquired knowledge.

Each PhD student will also give oral presentation which will be followed by discussion, simulating conditions of a typical scientific meeting. This will expose PhD students to possible problems with understanding questions and formulating clear replies. The talks and discussions will be taped and analyzed later by the whole group, under teacher's supervision.

PhD students will also prepare posters aimed at general public, which will be reviewed by teachers and fellow PhD students. The posters should aim at popularizing scientific results.

Teaching methods

The methods include lecture, discussion, group project, individual project, review, self-evaluation, presentation:

- lectures introducing topics and teaching theoretical knowledge; lectures include examples of effective library and data-base queries, well prepared and faulty scientific reports and papers, polite and constructive vs. impolite and unconstructive reviews, etc.; lectures explain the basis of communication rules and methods that increase efficiency of presentation.
- workshops teaching practical skills; workshops include training in research paper writing and reviewing scientific manuscripts, preparation of different types of presentations (oral, poster), presentation in front of group of people with video-recording.

Evaluation

Passing the course with a grade based on:

- short scientific paper based either on own data or on meta-analysis – 30%
- manuscript review – 20%
- oral talk with computer-based presentation of scientific data to scientific community – 20%
- poster preparing and presentation to general public – 20%
- active participation in discussions (including critical evaluation of other presentations) – 10%
- attendance of at least 26 hours out of 30.

Methods and criteria of assessment

Evaluation of written reports and presentations. Evaluation of activity of PhD students during practical.

Workload required to achieve learning outcomes

Participation in the lectures (10 hours) and workshops (20 hours). Self-preparation of oral talk and poster (15 hours), preparation of short scientific paper and manuscript review (group work, 15 hours).

2 ECTS.

Language

English.

Literature

Basic literature:

1. Carpenter, K. 2001. How to write a scientific article. The Journal of Paleontological Sciences: JPS.TD.07.0001.
2. (http://www.aaps-journal.org/submission%20pdf/How%20to%20Write%20a%20Scientific%20Paper.pdf).
3. Collier, J. M., Edmondson, S.-J. 2011. How to write a scientific article. Face Mouth & Jaw Surgery, 1: 5-10.
4. Comfort, J. 1996. Effective presentations: student's book Oxford University Press.
5. Day, R. A., Gastel, B. 2006. How to write and publish a scientific paper. Cambridge University Press, 320 pp.
6. Fiedland, A. J., Folt, C. L. 2009. Writing succesful science proposals. Yale University, 201 pp.

7. Katz., M. J. 2009. From research to manuscript. A guide to scientific writing. Second edition. Springer, 205 pp.
8. McCarthy, M., O'Dell, F. 2008. Academic vocabulary in use. Cambridge University Press, 176 pp.
9. Shubrook, J.H., Kase, J., Norris, M. 2010. How to write a scientific article. Osteopathic Family Physician, 2: 148-152.
10. Stirling, J.W. 2001. Writing articles for scientific journals: A basic guide. Australian Journal of Medical Science, 22: 171-182.
11. Swales, J. M., Feak, C. B. 2009. Academic writing for graduate students: essential tasks and skills. University of Michigan, 331 pp.
12. www.sfedit.net

DVD:
http://www.bookcity.pl/effective-presentations-dvd/pid/10021

Signatures

Signature of the coordinator .....

Signature of the Head of Doctoral School .....