

## SYLLABUS

### NAZWA JEDNOSTKI PROWADZĄCEJ KIERUNEK:

Zakład Biomedycyny i Genetyki

Katedra Biologii i Mikrobiologii Medycznej

Wydział Lekarski UM

Kierownik przedmiotu: dr hab n. med. Karolina H. Czarnecka-Chrebelska, prof. UM

NAZWA KIERUNKU: STUDIA DOKTORANCKIE

PROFIL KSZTAŁCENIA: OGÓLNOAKADEMICKI

SPECJALNOŚĆ: -

POZIOM KSZTAŁCENIA: STUDIA III STOPNIA

1. Course name: **Effective Scientific Communication and Presentation Skills**
2. Course code: -
3. Type of the Course: **soft skills development**
4. Language of the Course: **English**
5. The Objectives of the course:

This course provides participants with practical skills and strategies to prepare and deliver clear, engaging, and scientifically accurate presentations. It focuses on overcoming common challenges in research communication, including presenting complex data in an accessible way, managing stress and uncertainty in public speaking, structuring presentations logically, and tailoring content to diverse audiences.

Participants will gain hands-on experience in data visualization, content organization, and adapting presentations for various contexts such as research dissemination, project pitches, or funding applications. Emphasis is placed on both the preparation process and delivery techniques, including responding effectively to questions and critical feedback.

#### Detailed course objectives:

- Plan, prepare, and deliver a scientific or project-related presentation / Pitch presentation / Presentations of projects when applying for funding suited to the needs of the audience, i.e., adjusting the level of complexity of the lecture to the target group,
- Simplify complex data and results without losing scientific rigor.
- Understanding the rules of organizing content within the presentation and expression, planning the structure of the document, using visual aids - Apply effective visualization techniques to enhance clarity and engagement.
- Communicate confidently in public, maintaining audience interaction and control.
- Handle difficult questions and critical feedback professionally.

6. **Forma studiów:** stacjonarne i niestacjonarne

7. **Rok studiów:** I-IV

8. **Forma zajęć i liczba godzin dla poszczególnych form zajęć:** **Optional seminar - 10 hours**

9. **Number of ECTS credits and their distribution, taking into account the individual forms of student work:**

Number of ECTS credits (2 points)

The workload of a Ph.D. student to achieve the assumed educational results is approx. 20 hours, including 10 contact hours (1 ECTS point) requiring the direct participation of an academic teacher and 5 hours not

requiring the direct involvement of the teacher (1 ECTS point). The range of hours depends on the level of knowledge of the Ph.D. student at the time of commencement of studies, the abilities of the Ph.D. student, and time devoted to individual and group work needed to complete the course, i.e., collecting and selecting appropriate materials; studying teaching materials; the time required to prepare a multimedia presentation and for an oral presentation.

**10. Name and surname of the lecturer:**

**Karolina H. Czarnecka-Chrebelska, PhD, DSc.**

karolina.czarnecka@umed.lodz.pl

**11. Prerequisites:**

Basic information on interpersonal and social communication forms and willingness to develop such skills.

Group work and group tasks are required.

Computer skills and knowledge of basic graphic editors and computer programs for multimedia presentations (e.g., Microsoft PowerPoint, Microsoft Office).

**12. Teaching methods:**

- Verbal presentation
- Multimedia presentation
- Discussion
- Discussion and analysis of exemplary presentations

**13. Course content:**

This course is designed to equip participants with the skills and confidence necessary to prepare and deliver effective scientific presentations, project pitches, and R&D result reports. It addresses the key challenges researchers and professionals face when communicating complex data, including the difficulty of simplifying results without losing scientific accuracy, structuring content logically, and adapting the message to diverse audiences ranging from experts to non-specialists.

Participants will learn strategies for overcoming stress and uncertainty in public speaking, maintaining audience engagement, and managing presentation time effectively to balance clarity with completeness. Special emphasis is placed on data visualization, including the use of clear, aesthetic, and meaningful graphics, as well as the avoidance of common pitfalls such as overcrowded slides or unreadable charts.

The course also provides practical techniques for tailoring presentations to the expectations of different audiences, ensuring that complex issues are conveyed in a clear and accessible manner. Attention will be given to critical analysis and selection of presentation materials, drawing on literature and database sources. Participants will practice organizing their content into coherent structures—from introduction, through methods and results, to conclusions—while developing the ability to communicate key information effectively.

Finally, the training covers strategies for handling questions, including managing criticism and responding to unexpected or difficult inquiries. By the end of the course, participants will have mastered essential principles of scientific communication and presentation design, enabling them to confidently share their research and ideas in academic, professional, and funding contexts.

**14. Educational outcomes:**

**Knowledge:**

After completing the course: " Effective Scientific Communication and Presentation Skills", the Ph.D. student should acquire knowledge about:

1. essential criteria and types of scientific presentation;
2. recognizing the needs/expectations of recipients, ways of adjusting statements and content in the presentation to the audience;

3. principles of planning and preparing a poster, scientific publication, or conducting an oral presentation; structure a presentation logically (introduction–methods–results–conclusions).
4. the rules for including citations, figures, and illustrations in the presentation, respecting the principles of ethics and copyright, and the act on copyright.

**Skills:**

After completing the course: " Effective Scientific Communication and Presentation Skills", the Ph.D. student should acquire the following skills:

1. Assess the target group and adaptation of media and materials to this group (students, lecturers, doctors, patients, adults, children, entrepreneurs);
2. Plan, prepare, and deliver a scientific or project-related presentation suited to the needs of the audience.
3. Simplify complex data and results without losing scientific rigor.
4. Apply effective visualization techniques to enhance clarity and engagement.
5. Manage time effectively during preparation and delivery.
6. Communicate confidently in public, maintaining audience interaction and control.
7. Handle difficult questions and critical feedback professionally.

The mentioned skills above are generally valuable for dealing with the environment. Working on better communication and critically analyzing the messages we want to convey affect relations with the environment can be helpful, especially in crisis / challenging situations.

**Social competences:**

After completing the course: " Effective Scientific Communication and Presentation Skills" the Ph.D. student should acquire the following social competencies:

1. can educate other people
2. knows how to cooperate in a group
3. understands the body language during the presentation;
4. raises its professional qualifications through lifelong learning
5. knows how to cooperate with representatives of other medical professions and administrative employees of healthcare

**15. The literature list:**

**Basic literature list:** Wasylczyk P. Prezentacje naukowe. Praktyczny poradnik dla studentów, doktorantów i nie tylko. Wydawnictwo Naukowe PWN, Warszawa, 2017.

**Supplementary literature list:** Weiner J, Weiner J (3.). „Technika pisania i prezentowania przyrodniczych prac naukowych”. Wydawnictwo Naukowe PWN, Warszawa, 2018.

**15. Methods and ways of verifying the learning outcomes, including the form and conditions of passing the course:**

**KNOWLEDGE:** The basis for passing the seminar is attendance, participation in teamwork and discussion, and implementation of tasks during classes.

**SKILLS** Assessment of practical activities such as:

- activity at the seminar
- carrying out tasks during classes
- working in a task force - ability to complete a task in a group,

**16. Informacje dodatkowe:**

Contact to the course leader: Karolina H. Czarnecka-Chrebelska karolina.czarnecka@umed.lodz.pl

**Zajęcia odbędą się w semestrze zimowym w MolEcoLab (Mazowiecka 5, budynek A-6)  
– sala 0.44 na parterze.**

**Planowane terminy zajęć:**

- 13.01.2026 w godz. 14.15 - 18:00
- 20.01.2026 w godz. 14.15 - 18:00

**17. Oświadczenie prowadzącego i jego podpis:**

I declare that the syllabus contents contained in this syllabus are the result of my individual creative work carried out within the framework of an employment/cooperation relationship resulting from a civil law contract and that no third parties are entitled to any copyrights on this account.

**18. Podpis Kierownika MSD:**

**19. Data:**