Discipline MCP5904
AI and Scientific Communication Techniques for Presentations

Concentration area: 5131

Creation: 11/06/2026

Activation: 12/06/2026

Credits: 4

Workload:

Theory (weekly)	Practice (weekly)	Study (weekly)	Duration	Total
10	10	10	2 weeks	60 hours

Professors:

Marcelo Hiroshi Nakagawa

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Stephanie Itala Rizk

Objectives:

Develop practical and creative skills for designing scientific presentations with high visual, technical, and narrative impact, applied to thesis defenses and academic communication. Teach the use of generative artificial intelligence tools to optimize the creation of slides, scripts, and effective prompts, with a focus on ethics, clarity, and scientific persuasion. Strengthen critical analysis of the different artificial intelligence tools available, distinguishing how each should be used to create and build scientific presentations; encourage students to test the methods and demonstrate in person the strengths and weaknesses of the AI tools evaluated.

Rationale:

Thesis defenses represent the culminating moment of scientific training. Despite the technical excellence of research, many presentations lack visual clarity, narrative coherence, and communicative impact. The course aims to integrate design techniques applied to science with AI tools (such as ChatGPT, Gemini, Claude AI, Gamma, Beautiful.ai, and Canva), enabling students to translate their research findings into engaging and scientifically sound presentations. This proposal aligns with the pedagogical modernization of the program, fostering competencies in scientific communication and the ethical use of artificial intelligence in academic contexts.

Content:

1. Fundamentos da comunicação científica visual. 2. Estrutura narrativa e storytelling em apresentações de tese. 3. Princípios de design aplicados à ciência (layout, cor, tipografia e clareza). 4. Ferramentas de IA para criação e aprimoramento de slides. 5. Engenharia de prompts para estruturação de conteúdo e revisão científica. 6. Oficina prática: elaboração e apresentação de slides da própria tese. 7. Simulação da defesa de tese com feedback técnico

e comunicacional. 8. Análise comparativa crítica de ferramentas de IA: testes práticos, identificação de falhas e virtudes, e apresentação presencial dos resultados.

Type of Assessment:

• Participation in in-person workshops (30%) • Development of thesis slides using AI tools (40%) • Final simulated presentation with technical and communication evaluation (30%)

Notes/Remarks:

Minimum number of students: 10 Maximum number of students: 30

Bibliography:

1. Karpatne, A., Deshwal, A., Jia, X. et al. AI-enabled scientific revolution in the age of generative AI: second NSF workshop report. npj Artif. Intell. 1, 18 (2025). https://doi.org/10.1038/s44387-025-00018-6 2. Alley M. The Craft of Scientific Presentations. Springer, 2023. 3. Duarte N. Resonate: Present Visual Stories that Transform Audiences. Wiley, 2021

Class type:

Presencial