

Modulbezeichnung: Scientific Writing, Reviewing and Presenting (SciWaRP) **5 ECTS**
(Scientific Writing, Reviewing and Presenting)

Modulverantwortliche/r: Thomas Seel

Lehrende: Thomas Seel, Ive Weygers

Startsemester: WS 2022/2023	Dauer: 1 Semester	Turnus: halbjährlich (WS+SS)
Präsenzzeit: 60 Std.	Eigenstudium: 90 Std.	Sprache: Englisch

Lehrveranstaltungen:

Scientific Writing, Reviewing and Presenting (WS 2022/2023, Vorlesung, 4 SWS, Thomas Seel et al.)

Empfohlene Voraussetzungen:

Participants should have very good command of the English language and should be familiar with common spelling rules. They should have completed at least one scientific project, such as a Bachelor thesis or a similar piece of work.

Inhalt:

This module is concerned with methods and tools for writing scientific papers, reviewing manuscripts and presenting scientific results at conferences. Participants will learn about common procedures and widely accepted standards of scientific practice, they will acquire and further develop skills and expertise that are crucial for successful research work, and they will become familiar with several useful tools for scientific writing, reviewing and presenting. All topics will be presented and discussed openly, and participants will be encouraged to contribute different perspectives and additional aspects. The course work will be largely practical in the sense that all learned concepts are directly applied to selected examples.

Topics include, but are not limited to:

- Basic principles of scientific practice
- How to plan, structure and draft scientific papers
- Plots, figures, and graphical excellence
- Tools for writing and editing papers
- How to write in appropriate language and style
- Writing an example mini paper
- Understanding the peer review system
- How to effectively review scientific manuscripts
- Tools for reviewing and evaluating papers
- Reviewing an example paper
- How to present scientific results in a talk
- Why and how - convince and explain
- Tools for advanced presentation design
- Addon: Systematic and efficient literature review
- Addon: Cover letters, author's response and rebuttals

Lernziele und Kompetenzen:

Participants will learn about common procedures and widely accepted standards of scientific practice, they will acquire and further develop skills and expertise that are crucial for successful research work, and they will become familiar with several useful tools for scientific writing, reviewing and presenting.

Literatur:

- Chris A. Mack (2018) "How to write a good scientific paper", SPIE PRESS, Bellingham, Washington, USA, <https://doi.org/10.1117/3.2317707.sup>.
- The Chicago Manual of Style. 17th edition. 2017 by The University of Chicago. <https://www.chicagomanualofstyle.org>
- How to give a great scientific talk. <https://www.nature.com/articles/d41586-018-07780-5>
- Scientific presentations: A cheat sheet. <http://blogs.nature.com/naturejobs/2017/01/11/scientific-presentations-a-cheat-sheet/>
- Creating a 10-15 Minute Scientific Presentation. <https://www.northwestern.edu/climb/resources/oral-communication-skills/creating-a-presentation.html>

- Matt Carter (2013), "Designing Science Presentations: A Visual Guide to Figures, Papers, Slides, Posters, and More", ISBN 0123859697.
- J. Matthias Starck (2017), "Scientific Peer Review: Guidelines for Informative Peer Review", Springer Spektrum, ISBN 3658199148.
- Step by step guide to reviewing a manuscript. <https://authorservices.wiley.com/Reviewers/journal-reviewers/how-to-perform-a-peer-review/step-by-step-guide-to-reviewing-a-manuscript.html>

Verwendbarkeit des Moduls / Einpassung in den Musterstudienplan:

Das Modul ist im Kontext der folgenden Studienfächer/Vertiefungsrichtungen verwendbar:

[1] **Data Science (Master of Science)**

(Po-Vers. 2021w | Gesamtkonto | Technische Schlüsselqualifikationen | Scientific writing, reviewing and presenting)

[2] **Medizintechnik (Master of Science)**

(Po-Vers. 2018w | TechFak | Medizintechnik (Master of Science) | M7 Flexibles Budget Technische Fakultät | Scientific writing, reviewing and presenting)

[3] **Medizintechnik (Master of Science)**

(Po-Vers. 2019w | TechFak | Medizintechnik (Master of Science) | Modulgruppen M1, M2, M3, M5, M7 nach Studienrichtungen | Studienrichtung Medizinische Bild- und Datenverarbeitung | Flexibles Budget / Flexible budget | Scientific writing, reviewing and presenting)

[4] **Medizintechnik (Master of Science)**

(Po-Vers. 2019w | TechFak | Medizintechnik (Master of Science) | Modulgruppen M1, M2, M3, M5, M7 nach Studienrichtungen | Studienrichtung Medizinelektronik | Flexibles Budget / Flexible budget | Scientific writing, reviewing and presenting)

[5] **Medizintechnik (Master of Science)**

(Po-Vers. 2019w | TechFak | Medizintechnik (Master of Science) | Modulgruppen M1, M2, M3, M5, M7 nach Studienrichtungen | Studienrichtung Medizinische Produktionstechnik, Gerätetechnik und Prothetik | Flexibles Budget / Flexible budget | Scientific writing, reviewing and presenting)

Studien-/Prüfungsleistungen:

Scientific writing, reviewing and presenting (Prüfungsnummer: 76831)

(englische Bezeichnung: Exam SciWaRP)

Prüfungsleistung, mündliche Prüfung, Dauer (in Minuten): 20

Anteil an der Berechnung der Modulnote: 100% Prüfungssprache: Englisch

Erstablingung: WS 2022/2023, 1. Wdh.: SS 2023

1. Prüfer: Thomas Seel