

Die Modulbeschreibung sollte direkt über diesen [Link](#) in HISinOne eingepflegt werden.

Module code	Module title	Category
MAIE2050	Scientific Writing	MA
	Degree program	MA Software Engineering
	Faculty	Building Services Engineering and Computer Science

Module coordinator	Prof. Dr. Volker Herwig
Module type	Mandatory module
Frequency	1x annually in WiSe
Recommended semester	2. semester
Credit (ECTS-Points)	5
Academic Assessment Method	Exam Pr = Project / Assignment iteratively improved short paper or extended abstract supported by an annotated bibliography and a brief presentation
Teaching language	English
Admission requirements for this Module	none
Module duration	1 Semester
Required Registration	Students enrolled in the above-mentioned degree program/standard semester will be registered automatically upon re-enrollment; all other participants, please refer to the information below. none

Course		Lecturer	Type	Group Size (max.)	Number of Groups	Contact hours per week (SWS)	Workload (in h)	
							Face-to-face	Self-study
1	Scientific Writing	nn	Seminar	30	1	4	60	65
2	Titel der Lehrveranstaltung.	Dozent*in	Wählen Sie ein Element aus.		Wählen Sie ein Element aus.			
3	Titel der Lehrveranstaltung.	Dozent*in	Wählen Sie ein Element aus.		Wählen Sie ein Element aus.			
4			Wählen Sie ein Element aus.					

5	Titel der Lehrveranstaltung.	Dozent*in	Wählen Sie ein Element aus.		Wählen Sie ein Element aus.			
Sum						4,0	60	65
Total Workload for Module							125	

Learning Objectives / Learning outcomes	1. Differentiate major scholarly genres (e.g., conference paper, journal article, thesis, technical report) and select an appropriate venue and template for a given contribution. (<i>Understand/Apply</i>) 2. Formulate a clear research question and contribution claim, and structure a manuscript using the IMRaD pattern (Introduction, Methods, Results, and Discussion) or a justified alternative. (<i>Create</i>) 3. Search, evaluate, and synthesize literature from reputable databases; construct a coherent related-work section that positions the contribution. (<i>Analyze/Create</i>) 4. Apply correct citation and referencing conventions (e.g., IEEE or APA) using a reference manager, and demonstrate academic integrity by avoiding plagiarism and improper paraphrase. (<i>Apply/Evaluate</i>) 5. Design effective argumentation and narrative flow at paragraph and section level (topic sentences, signposting, cohesion), ensuring logical alignment between claims, evidence, and conclusions. (<i>Create/Evaluate</i>) 6. Report methods and results with reproducibility in mind (data/code availability, parameters, evaluation protocols), and state limitations and threats to validity. (<i>Apply/Evaluate</i>) 7. Create clear, self-contained figures and tables (informative captions, units, legends) and select appropriate visual encodings for quantitative and qualitative results. (<i>Create</i>) 8. Edit and revise drafts systematically using checklists and peer feedback to improve clarity, concision, tone, and readability; correct common grammar and style issues. (<i>Evaluate/Apply</i>) 9. Conduct a constructive peer review (criteria-based) and compose a professional response-to-reviewers letter addressing major and minor comments. (<i>Evaluate/Create</i>) 10. Summarize and pitch a research work via a structured abstract and a short talk or poster one-pager tailored to a defined audience. (<i>Create/Apply</i>) 11. Identify ethical and legal considerations (authorship, conflicts of interest, data/privacy) and align the manuscript with relevant policies and guidelines. (<i>Understand/Apply</i>) 12. Plan and manage the writing process (milestones, versions, tool-chain such as LaTeX/Word and reference managers), and reflect on personal improvement goals for future writing. (<i>Apply/Evaluate</i>)
Contents	This module enables students to plan, draft, revise, and present scholarly texts in English for computer science/software engineering. It covers genre conventions (conference paper, journal article, thesis, technical report) and manuscript structure (e.g., IMRaD), framing research questions and contributions, literature search and synthesis, correct citation and academic integrity, and clear argumentation at paragraph and section level. Students learn to report methods and results with reproducibility in mind, design effective figures and tables, and use appropriate tools (Word/LaTeX, reference managers). The module also introduces peer-review practice (reviewing and responding to reviewers), basic ethics (authorship, conflicts of interest, data/privacy), and concise research communication (abstracts, short talks, poster one-pagers). Practical work culminates in an iteratively improved short paper or

	extended abstract supported by an annotated bibliography and a brief presentation.
Literature	• Zobel, J. (2014). <i>Writing for computer science</i> (3rd ed.). Springer. • Schimel, J. (2012). <i>Writing science: How to write papers that get cited and proposals that get funded</i>. Oxford University Press. • Day, R. A., & Gastel, B. (2016). <i>How to write and publish a scientific paper</i> (8th ed.). Greenwood. • Belcher, W. L. (2019). <i>Writing your journal article in twelve weeks</i> (2nd ed.). University of Chicago Press. • Alley, M. (2018). <i>The craft of scientific writing</i> (4th ed.). Springer. • Montgomery, S. L. (2017). <i>The Chicago guide to communicating science</i> (2nd ed.). University of Chicago Press. • Healy, K. (2018). <i>Data visualization: A practical introduction</i>. Princeton University Press. • Silvia, P. J. (2018). <i>How to write a lot: A practical guide to productive academic writing</i> (2nd ed.). American Psychological Association.