



## Modulhandbuch

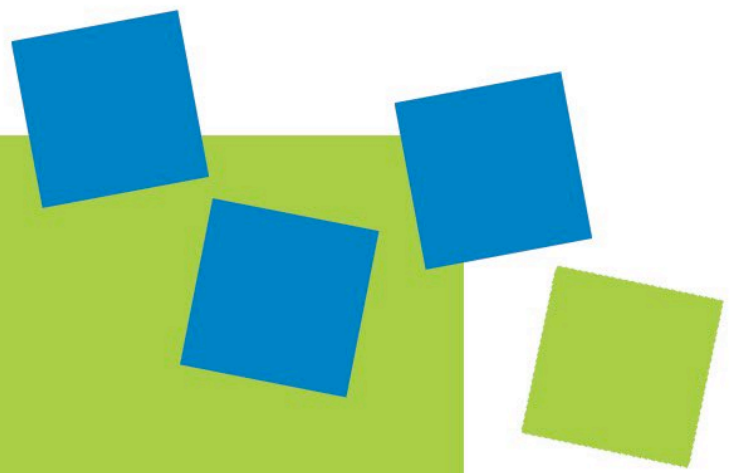
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*Promotionsbegleitzertifikat (PBZ)*

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*School of Business and Technology*

Stand: 30.04.2024



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## 1 Introduction to the course of studies

<b>Promotionsbegleitzertifikat</b>			
<b>Short form:</b>	PBZ	<b>SPO-Nr.:</b>	SWS/HSAN-20232
<b>Course management:</b>	Eva Didion		
<b>Studienfachberatung:</b>			
<b>ECTS:</b>	30		
<b>Standard period of study:</b>	4 semesters		
<b>Admission requirements:</b>	<ul style="list-style-type: none"> <li>• University degree (Diplom, Master's or an equivalent domestic or foreign degree)</li> <li>• Confirmation of supervision by a professor at Ansbach University of Applied Sciences (confirmed by supervision agreement)</li> </ul>		
<b>Usability:</b>	Promotionsbegleitzertifikat		
<b>Intended learning outcomes:</b>			
<p>The aim of the certificate course is to acquire and further develop skills, methods and knowledge for working in academic fields and writing a dissertation. The certificate course is intended to enable doctoral candidates to work on their dissertation independently and in accordance with the rules of good scientific practice and to actively participate in the scientific discourse in their field of research.</p> <p>The general qualification objectives are listed below in compact form. Please refer to the respective module descriptions for details:</p> <p>Acquisition of expert knowledge:</p> <ul style="list-style-type: none"> <li>• Deepening and expanding expert knowledge in the relevant research area.</li> <li>• Application of theoretical concepts and methods to your own dissertation.</li> </ul> <p>Methodological competence:</p> <ul style="list-style-type: none"> <li>• Development of research methods and techniques for the dissertation.</li> <li>• Critical reflection and selection of methodological approaches according to the research questions.</li> </ul> <p>Independent dissertation:</p> <ul style="list-style-type: none"> <li>• Facilitate independent work on the dissertation.</li> <li>• Implementation of the principles of good scientific practice in the research work.</li> </ul> <p>Participation in scientific discourse:</p> <ul style="list-style-type: none"> <li>• Active participation in scientific exchange in the research field.</li> <li>• Presentation of own research results at conferences and in specialist journals.</li> </ul> <p>Promotion of soft skills:</p> <ul style="list-style-type: none"> <li>• Development of key skills such as communication, teamwork and time management.</li> <li>• Enhance the ability to critically examine scientific texts and results.</li> </ul>			
<b>Content:</b>			
<p>The standard period of study for this certificate course is 4 semesters.</p> <p>The course is divided into the following module groups:</p> <ul style="list-style-type: none"> <li>• The compulsory modules (10 ECTS) The compulsory modules of this certificate course are designed to provide doctoral students with a solid foundation of knowledge, skills and ethical principles for their research work. The modules cover various aspects of scientific practice and research ethics to ensure that doctoral students can lay the foundations for responsible and high-quality research work.</li> <li>• Compulsory elective modules (20 ECTS) The compulsory elective modules allow doctoral students to set their own focus and expand specific competencies. These modules offer a wide range of topics, including teaching, language skills, data analysis and specialized research methods.</li> </ul>			

<b>Graduation / Academic degree:</b>
Certificate

## 2 Description of Modules

## 2.1 Compulsory modules

Good Scientific Practice and Compliance			
Module abbreviation:	PBZ_Good Scientific Practice Compliance	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr. Christine Dauth		
Language of instruction:	English		
Credit points / SWS:	1 ECTS / 1 SWS		
Workload:	Contact hours:	3 h	
	Self-study:	22 h	
	Total:	25 h	
Module duration:	1 Semester		
Frequency:	only winter term		
Subjects of the module:	Good Scientific Practice and Compliance		
Lecture types:	Self-study module and case study seminar		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b></p> <p>Students acquire knowledge of the principles and standards of responsible scientific research. This includes knowledge of the ethical principles of science (honesty, transparency, reproducibility, identifiability, etc.), knowledge of the different types of scientific misconduct and understanding of their consequences when detected. They are also made aware of misconduct related to abuse of power, discrimination, and sexual harassment. This knowledge of their responsibilities, rights, and obligations as early-stage researchers should enable them to successfully complete a high-quality dissertation.</p> <p><b>Professional Skills:</b></p> <p>Students become aware of the challenges and dilemmas of scientific work (conflicts of interests, pressure to publish, etc.). At the same time, they improve their problem-solving skills. Specifically, this means recognizing and solving ethical problems through constructive conflict resolution, whistleblowing in cases of suspected misconduct, and seeking support from the appropriate university bodies.</p> <p><b>Social Skills:</b></p> <p>Students are able to take responsibility for their own scientific integrity and that of the scientific community. Specifically, this means following the rules of good scientific practice and being prepared to cooperate in the investigation of misconduct.</p>			



**Content:**

Students will learn about the specific Statutes on Good Scientific Practice at Ansbach University of Applied Sciences and the DFG Guidelines for Safeguarding Good Research Practice. This includes a full understanding of the guidelines on the general principles, the guidelines on the research process, and the guidelines on procedures in case of non-compliance with good research practice. In both the self-study module and in the classroom, we will explore the following points and discuss case studies to deepen understanding:

- Standards, values, and principles of good scientific practice
- Scientific misconduct and its consequences
- Plagiarism
- Publication Process (Open access strategies, predatory journals)
- Criteria for authorship
- Introduction to research data management
- Abuse of power and sexual harassment

**Examinations:**

Presentation, 10 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- Deutsche Forschungsgemeinschaft (2022): Guidelines for Safeguarding Good Research Practice. Code of Conduct, revised version 1.1. <https://zenodo.org/doi/10.5281/zenodo.3923601>

Managing Research Data and Open Science			
Module abbreviation:	PBZ_Manag.Resear.Data a.Open Science	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr. Sigurd Schacht		
Language of instruction:	English		
Credit points / SWS:	1 ECTS / 1 SWS		
Workload:	Contact hours:	8 h	
	Self-study:	17 h	
	Total:	25 h	
Module duration:	1 Semester		
Frequency:	only summer term		
Subjects of the module:	Managing Research Data and Open Science		
Lecture types:	seminar/exercise		
Prerequisite for participation:	According to SPO or study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students are familiar with best practice in Open Science and Research Data Management. Know the latest tools and methods.</p> <p><b>Action Competence:</b> Students are able to plan, organize, and publish their research activity using the Method of Open Science and Research Data Management.</p> <p><b>Social Skills:</b> Communication skills: Students participate in group discussions and presentations on open science and research data management</p>			
<b>Content:</b>			
<p>The module consists of seminar-style teaching and is divided into two parts, Open Science and Research Data Management:</p> <p><b>Open Science:</b></p> <p>I. Introduction to Open Science</p> <ul style="list-style-type: none"> <li>• Elements of Open Science (Open Data, Open Material, Open Source, Open Peer Review, and Open Educational Resources).</li> </ul> <p>II. Replication Crisis, Publication-Bias, and P-Hacking</p> <p>III. The Open Research Process</p>			

#### IV. Tools & Frameworks for Open Research

- Tools that support the process
- Methods that support the process (Registered Reports, Power Analysis, Sample Design, Open Data, Open Access (self-study via Smart VHB))

#### Research Data Management

##### I. Introduction to Research Data Management

- Overview of data management in research
- Importance of data management in ensuring research quality, reproducibility and transparency

##### II. Planning and Organizing Research Data

- Developing data management plans
- Metadata and documentation standards

##### III. Data Collection and Recording

- Ethical considerations in data collection → [Hinweis auf Datenschutz \(DSGVO\)](#)
- Use of digital tools and software for data management
- Quality control and data validation techniques

##### IV. Data Sharing, Collaboration, and Archiving

- Collaborative data management in multi-party research projects
- Working with sensitive and confidential data
- Long-term preservation of research data
- Metadata and documentation for data preservation

##### VI. Conclusion

- Best practices for ongoing data management throughout the research lifecycle

#### Examinations:

Presentation, 10 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

#### Literature:

- Open Science: Brachem, J., Frank, M., Kvetnaya, T., Schramm, L. F., & Volz, L. (2022). Replikationskrise, p-hacking und Open Science. Psychologische Rundschau.
- Open Science: Foster, E. D., & Deardorff, A. (2017). Open science framework (OSF). Journal of the Medical Library Association: JMLA, 105(2), 203.
- Research Data Management: Borghi, J., & Van Gulick, A. (2022). Promoting Open Science Through Research Data Management. Harvard Data Science Review, 4(3).  
<https://doi.org/10.1162/99608f92.9497f68e>
- Research Data Management: Berkeley Library: Reproducible Research Practices: Research Data Management. <https://guides.lib.berkeley.edu/c.php?g=652220&p=7447488>
- Research Data Management: Gandrud, C. (2018). Reproducible research with R and R studio. Chapman and Hall/CRC.

- Research Data Management:Gundersen, O. E., & Kjensmo, S. (2018, April). State of the art: Reproducibility in artificial intelligence. In Proceedings of the AAAI Conference on Artificial Intelligence (Vol. 32, No. 1).
- Research Data Management:Cacho, J. R. F., & Taghva, K. (2020). The state of reproducible research in computer science. In 17th International Conference on Information Technology–New Generations (ITNG 2020) (pp. 519-524). Springer International Publishing.
- Research Data Management:Klar, J. et. al: Forschungsdaten.org. <https://forschungsdaten.org>

Research Ethics			
Module abbreviation:	PBZ_Research Ethics	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr. rer. nat. Sibylle Gaisser		
Language of instruction:	Deutsch		
Credit points / SWS:	1 ECTS / 1 SWS		
Workload:	Contact hours:	5 h	
	Self-study:	20 h	
	Total:	25 h	
Module duration:	1 Semester		
Frequency:	only summer term		
Subjects of the module:	Research Ethics		
Lecture types:	seminar/exercise		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	Previous participation in the Good Scientific Practice and Compliance course		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students have knowledge of fundamental concepts of applied and philosophical ethics and their application to current issues in the fields of engineering, natural sciences, economics and social sciences.</p> <p><b>Action Competence:</b> Students can evaluate research according to ethical guidelines and submit an application to an ethics committee.</p> <p><b>Social Skills:</b> Communication skills, ability to reflect</p>			
<b>Content:</b>			
<p>The module Research Ethics explains the basics of ethical principles and ethical evaluation and teaches students how to independently prepare an ethics proposal.</p> <p>The module consists of seminar-based teaching, online teaching and a seminar.</p> <p>In the module, the basics of independent ethical reflection are developed based on the participants' previous experience and doctoral projects and, building on this, an ethical analysis is carried out for a topic chosen by the participants themselves.</p> <p>The following content is taught in detail.</p> <ul style="list-style-type: none"> <li>• Fundamentals of applied and philosophical ethics</li> <li>• Methods of ethical evaluation</li> </ul>			

- The application to an ethics committee - process and content
- Ethical dilemmas in research

**Examinations:**

Presentation, 10 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- Deutsche Forschungsgemeinschaft. (2022). Guidelines for Safeguarding Good Research Practice. Code of Conduct. <https://doi.org/10.5281/zenodo.6472827>
- Dagmar Fenner (2022): Einführung in die angewandte Ethik, 2. vollständig überarbeitete und erweiterte Auflage; utb. ISBN 978-3-8252-5902-0

Literature Research and Management			
<b>Module abbreviation:</b>	PBZ_Literature Research Management	<b>Module-no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
<b>Responsible for module:</b>	Prof. Dr. Sebastian Sauer		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	1 ECTS / 1 SWS		
<b>Workload:</b>	Contact hours:		18 h
	Self-study:		7 h
	Total:		25 h
<b>Module duration:</b>	1 Semester		
<b>Frequency:</b>	only winter term		
<b>Subjects of the module:</b>	Literature Research and Management		
<b>Lecture types:</b>	seminar		
<b>Prerequisite for participation:</b>	According to SPO or Study plan		
<b>Recommended prerequisites:</b>	none		
<b>Usability:</b>	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b></p> <p>Students know the relevant databases and search engines for identifying scientific literature. They know how citation styles (e.g. APA 7) are structured and which types they can be divided into. They are aware of the scientific quality and limitations of certain literature works and research services.</p> <p><b>Action Competence:</b></p> <p>Students are able to use common software packages (e.g. Zotero) to store, manage and exchange literature sources and references. They can use relevant software to cite in their own scientific texts.</p> <p><b>Social Skills:</b></p> <p>Students have the ability to set their literature management goals according to the demands and nature of their academic work.</p>			
<b>Content:</b>			
<p>Students acquire basic competence in scientific literature management:</p> <ol style="list-style-type: none"> <li><i>Assess:</i> Distinguish and assess types of scientific literature and research services in terms of their characteristics</li> <li><i>Find:</i> Use common search tools to find appropriate sources as well as evaluating the quality of results</li> <li><i>Save:</i> Use software packages to build and manage your own collection of sources (e.g. by subject area)</li> </ol>			

4. *Cite*: Cite sources using appropriate software packages using the citation style displayed
5. *Share*: Exchange literature references and texts as well as collaborative writing on texts where appropriate

**Examinations:**

Presentation, 10 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- American Psychological Association. (2019). Publication manual of the American Psychological Association, 7th edition. American Psychological Association (APA).
- Peters, J. H., & Dörfler, T. (2019). Schreiben und Gestalten von Abschlussarbeiten in der Psychologie und den Sozialwissenschaften. <https://www.pearson-studium.de/drm/reader/nu/code/uesgvaaidpsy>



Literature Review			
<b>Module abbreviation:</b>	PBZ_Literature Review	<b>Module-no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
<b>Responsible for module:</b>			
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	1 ECTS / 1 SWS		
<b>Workload:</b>	Contact hours:		8 h
	Self-study:		17 h
	Total:		25 h
<b>Module duration:</b>	1 Semester		
<b>Frequency:</b>	only summer term		
<b>Subjects of the module:</b>	Literature Review		
<b>Lecture types:</b>	seminar		
<b>Prerequisite for participation:</b>	According to SPO or Study plan		
<b>Recommended prerequisites:</b>	none		
<b>Usability:</b>	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students know the objectives, procedure, variants and prerequisites of the literature review as a scientific research objective and type of study.</p> <p><b>Action Competence:</b> Students are able to carry out the essential steps of a literature review in a basic form. They have the competence to use the central methods and tools for the implementation, for example in the form of research databases.</p> <p><b>Social skills:</b> Students have the ability to set their literature review objectives according to the demands and nature of their academic work. They can weigh up the effort and benefits; they are aware of the limitations.</p>			
<b>Content:</b>			
<p>Students acquire basic skills in crafting scientific literature reviews:</p> <ol style="list-style-type: none"> <li><i>Variants:</i> Depending on the objective, different types of literature review can be distinguished (e.g. systematic review vs. meta-analysis), which differ in process, benefits and limitations.</li> <li><i>Databases:</i> The core of a literature review is the identification of literature; the central search location is special scientific databases, knowledge of which is therefore essential.</li> <li><i>Procedure:</i> The essential steps in their correct sequence define the work steps.</li> <li><i>Methods and tools:</i> Special software packages support a literature review, such as spreadsheets, databases, literature management and science mapping tools</li> </ol>			

5. *Quality criteria:* The quality of a literature review can be measured by (e.g.) a) completeness, b) actuality, c) unbiasedness, d) transparency and e) plausibility of the research strategy.

**Examinations:**

Presentation, 10 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- Booth, A., Sutton, A., Clowes, M., & James, M. M. S. (2021). Systematic approaches to a successful literature review. SAGE Publications. <https://books.google.de/books?id=SiExEAAAQBAJ>
- Kraus, S., Breier, M., Lim, W. M., Dabić, M., Kumar, S., Kanbach, D., Mukherjee, D., Corvello, V., Piñeiro-Chousa, J., Liguori, E., Palacios-Marqués, D., Schiavone, F., Ferraris, A., Fernandes, C., & Ferreira, J. J. (2022). Literature reviews as independent studies: Guidelines for academic practice. *Review of Managerial Science*. <https://doi.org/10.1007/s11846-022-00588-8>

Writing Scientific Publications			
Module abbreviation:	PBZ_Writing Scientific Publications	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr. Carolin Durst		
Language of instruction:	English		
Credit points / SWS:	3 ECTS / 3 SWS		
Workload:	Contact hours:	25 h	
	Self-study:	50 h	
	Total:	75 h	
Module duration:	1 Semester		
Frequency:	only summer term		
Subjects of the module:	Writing Scientific Publications		
Lecture types:	seminar/exercise		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b></p> <p><b>Know:</b> Student specification, analysis and evaluation of scientific publications according to the standards of good scientific practice. They have knowledge of the systematic and methodical approach to scientific writing and publishing, are aware of scientific research ethics and established reviewing processes.</p> <p><b>Understand:</b> Students will understand fundamental processes and interrelationships in the preparation of a scientific publication and the corresponding steps and actions during the publication process.</p> <p><b>Apply:</b> Within the scope of exercises, students are able to apply learned contents in a structured and targeted manner.</p> <p><b>Analyze:</b> Students are able to initiate, analyze, structure and continue the writing and publication of their research.</p> <p><b>Evaluate:</b> Students will be able to assess and evaluate the suitability of the approaches and recommendations for future, yet undefined publications. In addition, they will be able to critically scrutinize existing publications, identify occurring design errors and inconsistencies with regard to the train of thoughts and the traceability of data, statements and proofs as well as to correct identified inadequacy. Finally, they can define important decision criteria for assessing the effectiveness of possible measures with regard to ensuring a proper contribution to the current state of the art and the presentation of the research. Furthermore, they understand the scope of journals and can evaluate the fit of their work to the journal's scope and the editor's criteria on paper acceptance.</p> <p><b>Design:</b> The students are able to successfully plan, formulate, prepare, submit, revise, and finally publish a scientific paper in accordance with established standards and behaviors in today's scientific research community.</p>			

**Action Competence:**

The students are enabled to independently carry out all relevant steps of preparing, submitting and finally publishing a scientific paper in accordance with learned procedures and existing guidelines using a wide range of learned methods and tools. In addition, students will be able to independently schedule their work and meet milestones. The ability to objectively assess as well as to reflect on one's own strengths and weaknesses both from a technical point of view (including the implementation of learned methods) as well as from a social point of view (including the development of solutions and compromises in an interdisciplinary team) is acquired.

- Students can select an appropriate academic outlet to publish their research results
- Students can approach scientific writing projects in a structured way
- Students are able to structure a manuscript meeting the established standards in academic publishing
- Students have the competencies to write a cover letter, revision letter and to manage the review process
- Students can take advantage of the reviewer's recommendations to improve the manuscript
- Students are able to present their scientific article

**Social Skills:**

The students can independently organize the processing of discussions and workshop sessions in small groups and jointly develop solutions for the set challenges arising during scientific writing and publishing. In the joint discussions, the lecturer and fellow students give appreciative feedback and share gained experiences and recommendations of individual writing and publishing projects. Furthermore, the students provide feedback in peer-reviews for their colleagues.

**Content:**

The complete process of scientific writing and publishing (from the conceptual design of a manuscript to the final publication) is explained, analyzed and evaluated, and detailed insights into the process of publishing from an interdisciplinary perspective are provided. Furthermore, relevant competences are acquired for the independent handling, coordination. Monitoring of all activities and responsibilities (with regard to methods, tools, laws, etc.) are taught.

The module consists of seminar-based teaching, exercises and self-learning lectures with a total volume of 2 SWS.

- Overview of publication outlets
- Journal or conference? Strategies to find suitable publication outlets
- Authorship responsibility and guidelines
- How to write a scientific article
- Do's and don'ts in scientific writing
- Review management process - reviewer's perspective vs. submitter's perspective
- Structure and style of a cover letter for the revision of an article

**Examinations:**

Presentation, 10 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- <https://www.elsevier.com/connect/writing-a-science-paper-some-dos-and-donts>
- <https://vhbonline.org/vhb4you/vhb-jourqual/vhb-jourqual-3>
- <https://harzing.com/resources/journal-quality-list>
- <https://www.elsevier.com/connect/whats-the-best-journal-for-my-paper-new-tool-can-help>

- <https://researcheracademy.elsevier.com/writing-research/fundamentals-manuscript-preparation>
- Hall, G. M. (2012) "How to Write a Paper", Wiley-Blackwell \_ BMJ Books
- Gastel, B. and Day, R. A. (2022) "How to Write and Publish a Scientific Paper" Greenwood

Research Methods			
Module abbreviation:	PBZ_Research Methods	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:			
Language of instruction:	English		
Credit points / SWS:	1 ECTS / 1 SWS		
Workload:	Contact hours:	5 h	
	Self-study:	20 h	
	Total:	25 h	
Module duration:	1 Semester		
Frequency:	only winter term		
Subjects of the module:	Research Methods		
Lecture types:	e.g. seminar/exercise		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students understand the relevance and applications of research methods in various fields of research. They are able to distinguish deductive and inductive research approaches. They are familiar with different types of research traditions and designs (e.g., qualitative, quantitative, mixed methods, experimental and numerical analysis) and their respective strengths and weaknesses. Students have knowledge of several data collection methods and basic procedures on modeling and analyzing physical phenomena.</p> <p><b>Action Competence:</b> Students are able to critically evaluate research studies. They have the ability to design and execute a research project. They can select appropriate measures for data collection and evaluation. When conducting research, students are able to manage time and resources effectively.</p> <p><b>Social Skills:</b> Students are able to work independently and as part of a research team, and they have the ability to understand and respect diverse perspectives in research. They have acquired competencies to communicate effectively with a wide range of individuals, including research participants and academic peers.</p>			
<b>Content:</b>			
<p>The process of conducting research in different disciplines is explained, discussed, and critically reflected. The course consists the following topics:</p> <ul style="list-style-type: none"> <li>• Research traditions (e.g., qualitative, quantitative, mixed methods, design of experiments (DOE))</li> <li>• Research designs (e.g., experiment, survey, field study, numerical computer simulations)</li> </ul>			

- Quantitative and qualitative research methods of data collection (e.g., interview, eye tracking, physiological measures, big data)
- Collaboration and communication in a cross-disciplinary research environment

**Examinations:**

Project work (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- Beller, S. (2016). Empirisch forschen lernen. Konzepte, Methoden, Fallbeispiele, Tipps. Huber.
- Beins, B. C. (2018). Research methods: A tool for life. Cambridge University Press.
- Cresswell, J. W. & Cresswell. J. D. (2017). Research design (5th ed.). Sage.
- Händel, M., Wimmer, B. & Ziegler, A. (2020). E-portfolio use and its effects on exam performance – a field study. *Studies in Higher Education*, 45, 258–270. <https://doi.org/10.1080/03075079.2018.1510388>
- Kleppmann, W. (2016). Versuchsplanung – Produkte und Prozesse optimieren (9th ed.). Hanser.
- Walter, M., Storch, M. & Wartzack, S. (2014). On uncertainties in simulations in engineering design: A statistical tolerance analysis application. *Simulation*, 90 (5), 547–559. <https://doi.org/10.1177/0037549714529834>
- Walter, M.S.J., Klein, C., Heling, B. & Wartzack, S. (2021). Statistical Tolerance Analysis—A Survey on Awareness, Use and Need in German Industry. *Applied Sciences*, 11, 2622. <https://doi.org/10.3390/app11062622>

Research Funding and Research Programs			
<b>Module abbreviation:</b>	PBZ_Research Methods	<b>Module-no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
<b>Responsible for module:</b>			
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	1 ECTS / 1 SWS		
<b>Workload:</b>	Contact hours:	9 h	
	Self-study:	16 h	
	Total:	25 h	
<b>Module duration:</b>	1 Semester		
<b>Frequency:</b>	only summer term		
<b>Subjects of the module:</b>	Research Funding and Research Programs		
<b>Lecture types:</b>	seminar/exercise		
<b>Prerequisite for participation:</b>	According to SPO or Study plan		
<b>Recommended prerequisites:</b>	none		
<b>Usability:</b>	Promotionsbegleitstudium		
<b>Objectives:</b>			
<b>Knowledge:</b>			
Students know the basics of research funding in Germany, selected funding providers and funding programs for research projects as well as (online) sources for researching funding.			
Students will be able to identify contacts whose support they need in the application process. They will learn about initiating cooperation, time and task planning, financial planning, utilization planning and legally and procedurally compliant submission as necessary steps for a successful application. They will be familiar with the typical components of a funding application and know what information is expected to describe a research project in the "outline of ideas", "outline" and "full application" stages. They know the typical criteria used by funding bodies and reviewers to assess the eligibility of a project for funding.			
<b>Action Competence:</b>			
Students can research relevant funding calls for their field of research and extract funding criteria and necessary application documents from them. On this basis, they can make an initial assessment of the suitability of a research idea for the call. They can identify open questions throughout the application process and obtain specific specialist information and advice from suitable contacts. They are able to create an outline of a research idea in accordance with the funding provider's specifications. You can work in proposal teams on (more extensive) outlines and full proposals.			
<b>Social skills:</b>			
Students analyze text examples in teams and thus sharpen their analytical and judgment skills together.			



**Content:**

The module "Research Fundings and Research Programs" explains the basics of acquiring funding for your own research projects and teaches you how to submit applications.

The module consists of seminar-style teaching and self-study phases.

Content 1 Research funding and important funding programs in Germany and the EU

Content 2 Reading research calls and extracting information

Content 3 Planning funding projects (checking the suitability of ideas and calls for proposals, identifying success criteria, finding cooperation partners, planning partner contributions and applications)

Content 4 Writing funding applications (typical components, application team, time planning, do's and don'ts)

**Examinations:**

Project work (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

- Löhrmann, I. (2018). Im Wettbewerb ums fremde Geld. Die Kunst, an Drittmittel für die Forschung zu kommen. DUZ Verlags- und Medienhaus GmbH, ISBN 978-3-96037-292-9
- Preuß, S. (2017). Drittmittel für die Forschung: Grundlagen, Erfolgsfaktoren und Praxistipps für das Schreiben von Förderanträgen. Deutschland: Springer Fachmedien Wiesbaden.
- Lang, D. S., Marschall, D. M. (2020). Forschungsanträge in den Life Sciences: Drittmittel erfolgreich einwerben. Deutschland: tredition.

## 2.2 Wahlpflichtmodule

Academic writing in English			
Module abbreviation:	PBZ_Academic writing in English	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr.-Ing. Michael Walter		
Language of instruction:	English		
Credit points / SWS:	2 ECTS / 2 SWS		
Workload:	Contact hours:	23 h	
	Self-study:	27 h	
	Total:	50 h	
Module duration:	1 Semester		
Frequency:	only summer term		
Subjects of the module:	Academic writing in English		
Lecture types:	-		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p>This advanced seminar is designed to enhance the academic writing skills of PhD students, equipping them with the necessary tools to excel in scholarly communication in the English language. The course is structured to address three key areas of competence: Professional and methodological competence, Operational competence, and Social competence.</p> <p><b>Professional and Methodological Competence:</b></p> <ul style="list-style-type: none"> <li>• Develop a deep understanding of academic writing conventions and standards in English.</li> <li>• Hone critical thinking skills to effectively articulate and defend scholarly arguments.</li> </ul> <p><b>Operational Competence:</b></p> <ul style="list-style-type: none"> <li>• Acquire advanced skills in structuring and organizing academic papers, including abstracts, introductions, methods, results, and discussions.</li> <li>• Enhance proficiency in creating clear and concise academic prose, focusing on clarity, coherence, and cohesion.</li> <li>• Develop strategies for effective time management in the writing process, including goal-setting, drafting, revising, and editing.</li> </ul> <p><b>Social Competence:</b></p> <ul style="list-style-type: none"> <li>• Engage in collaborative writing and peer review processes to provide constructive feedback and receive critical input.</li> </ul>			

- Develop communication skills for presenting research findings both in writing and orally.
- Enhance cross-cultural communication competence to engage effectively in the global academic community.

**Content:**

Throughout the course, emphasis will be placed on practical application, with students actively working on their own research projects. The goal is to empower PhD students to produce high-quality academic writing that meets international standards and contributes meaningfully to their respective fields of study. By the end of the course, participants will have refined their academic writing skills and gained the confidence to navigate the complex landscape of scholarly communication in English.

**Examinations:**

Project work (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

Will be announced at the beginning

Bibliographic Analysis			
Module abbreviation:	PBZ_Bibliographic Analysis	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:			
Language of instruction:	English		
Credit points / SWS:	2 ECTS / 2 SWS		
Workload:	Contact hours:	12 h	
	Self-study:	38 h	
	Total:	50 h	
Module duration:	1 Semester		
Frequency:	Winter and summer term		
Subjects of the module:	Bibliographic Analysis		
Lecture types:	seminar		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p>This course is designed to equip PhD students with the essential skills for conducting bibliometric analyses, providing them with a comprehensive understanding of the quantitative aspects of scholarly research.</p>			
<b>Professional and Methodological Competence:</b>			
<ul style="list-style-type: none"> <li>• Develop proficiency in the principles and methodologies of bibliometric analysis.</li> <li>• Acquire a comprehensive understanding of bibliometric indicators, such as citation counts, h-index, and impact factors.</li> <li>• Gain the ability to critically evaluate and interpret bibliometric data.</li> <li>• Explore ethical considerations in bibliometric analysis, including responsible use of metrics and awareness of potential biases.</li> </ul>			
<b>Operational Competence:</b>			
<ul style="list-style-type: none"> <li>• Master the use of bibliometric tools and databases for data collection and analysis.</li> <li>• Develop skills in data preprocessing, cleaning, and normalization for accurate bibliometric measurements.</li> <li>• Gain practical experience in visualizing bibliometric data using appropriate software.</li> <li>• Understand how to integrate bibliometric analyses into research processes.</li> </ul>			

<p><b>Social Competence:</b></p> <ul style="list-style-type: none"> <li>• Foster collaboration and interdisciplinary communication through the use of bibliometric indicators.</li> <li>• Learn to communicate bibliometric findings effectively to diverse audiences, including researchers, policymakers, and the general public.</li> <li>• Understand the potential impact of bibliometric analysis on academic and institutional rankings.</li> <li>• Explore ethical considerations in the use and interpretation of bibliometric data within the scholarly community.</li> </ul>
<p><b>Content:</b></p> <ol style="list-style-type: none"> <li>1. Introduction to Bibliometrics: <ul style="list-style-type: none"> <li>• Definition and significance of bibliometric analysis.</li> <li>• Historical context and evolution of bibliometrics.</li> </ul> </li> <li>2. Bibliometric Indicators: <ul style="list-style-type: none"> <li>• Citation analysis, h-index, impact factors, and other key indicators.</li> <li>• Interpretation and limitations of bibliometric metrics.</li> </ul> </li> <li>3. Bibliometric Data Collection: <ul style="list-style-type: none"> <li>• Utilizing bibliographic databases and citation indices.</li> <li>• Data retrieval and management for bibliometric analysis.</li> </ul> </li> <li>4. Data Analysis and Visualization: <ul style="list-style-type: none"> <li>• Statistical techniques for bibliometric analysis.</li> <li>• Visualization tools and techniques for presenting bibliometric data.</li> </ul> </li> <li>5. Application of Bibliometrics: <ul style="list-style-type: none"> <li>• Bibliometric analysis in research evaluation and funding allocation.</li> <li>• Identifying research trends and collaboration networks through bibliometric mapping.</li> </ul> </li> <li>6. Ethical Considerations in Bibliometrics: <ul style="list-style-type: none"> <li>• Responsible use of metrics and avoiding misuse.</li> <li>• Addressing biases and limitations in bibliometric analysis.</li> </ul> </li> </ol> <p>Throughout the course, students will engage in hands-on exercises, case studies, and collaborative projects to apply their bibliometric knowledge. By the end of the course, participants will possess the skills and confidence to leverage bibliometric analysis as a powerful tool in their research endeavors.</p>
<p><b>Examinations:</b></p> <p>Project work (outside the examination period)</p> <p>The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.</p>
<p><b>Literature:</b></p> <p>Wird zu Beginn bekannt gegeben</p>

Grounded Theory			
Module abbreviation:	PBZ_Grounded Theory	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:			
Language of instruction:	English		
Credit points / SWS:	2 ECTS / 2 SWS		
Workload:	Contact hours:	12 h	
	Self-study:	38 h	
	Total:	50 h	
Module duration:	1 Semester		
Frequency:	Winter and summer term		
Subjects of the module:	Grounded Theory		
Lecture types:	seminar		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p>This course is designed to immerse PhD students in the principles and methodologies of Grounded Theory, offering a comprehensive exploration of qualitative research techniques.</p> <p><b>Professional and Methodological Competence:</b></p> <ul style="list-style-type: none"> <li>• Develop a deep understanding of the foundational principles and philosophy of Grounded Theory.</li> <li>• Master the skills of data collection through interviews, observations, and other qualitative methods.</li> <li>• Cultivate the ability to generate and analyze qualitative data systematically.</li> </ul> <p><b>Operational Competence:</b></p> <ul style="list-style-type: none"> <li>• Learn to code and categorize qualitative data in accordance with Grounded Theory principles.</li> <li>• Develop skills in theoretical sampling and constant comparative analysis.</li> <li>• Gain proficiency in using qualitative analysis software for organizing and managing data.</li> <li>• Understand how to develop and refine theoretical frameworks through an iterative and inductive process.</li> </ul> <p><b>Social Competence:</b></p> <ul style="list-style-type: none"> <li>• Engage in collaborative learning through peer discussions, group analysis, and constructive feedback.</li> <li>• Develop effective communication skills to convey qualitative findings to diverse audiences.</li> </ul>			

- Explore ethical considerations in qualitative research, emphasizing participant confidentiality and researcher reflexivity.
- Understand how Grounded Theory contributes to the broader academic and research community.

**Content:**

## Introduction to Grounded Theory:

- Historical context and development of Grounded Theory.
- Comparison with other qualitative research methodologies.

## Formulating Research Questions:

- Crafting open-ended and exploratory research questions.
- Conducting literature reviews to refine research inquiries.

## Data Collection Techniques:

- In-depth exploration of qualitative data collection methods (interviews, observations, etc.).
- Strategies for gaining rich and contextually relevant data.

## Coding and Categorization:

- Understanding the coding process in Grounded Theory.
- Developing categories and subcategories through constant comparative analysis.

## Theoretical Sampling and Saturation:

- Techniques for purposeful and theoretical sampling.
- Recognizing data saturation and determining sample sizes.

## Analysis and Software Tools:

- Analyzing qualitative data using thematic coding and constant comparison.
- Introduction to qualitative analysis software for managing and organizing data.

## Developing Grounded Theory:

- Iterative process of theory development.
- Refining and validating emergent theoretical frameworks.

## Ethical Considerations in Grounded Theory:

- Ensuring participant confidentiality and privacy.
- Reflexivity and ethical decision-making in qualitative research.

Throughout the course, students will engage in practical exercises, case studies, and group projects, allowing them to apply Grounded Theory methodologies to real-world research scenarios. By the end of the course, participants will possess the skills and knowledge to conduct rigorous and insightful qualitative research using the Grounded Theory approach.

**Examinations:**

Presentation (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

Wird zu Beginn bekannt gegeben



Presenting at Scientific Conferences			
Module abbreviation:	PBZ_Present.at Scientific Conferences	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr. Julia Sasse		
Language of instruction:	English		
Credit points / SWS:	2 ECTS / 2 SWS		
Workload:	Contact hours:		18 h
	Self-study:		32 h
	Total:		50 h
Module duration:	1 Semester		
Frequency:	only summer term		
Subjects of the module:			
Lecture types:	-		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students understand the different formats and purposes of scientific conferences. They are familiar with various presentation formats and respective goals and requirements and can write convincing abstracts. They are proficient in crafting concise and impactful presentations suited for traditional talks and scientific posters and alternative formats like lightning talks.</p> <p><b>Action Competence:</b> Students have practical skills essential for delivering well-structured and engaging scientific presentations. They are able to construct a coherent research narrative, conceptualize effective presentations, and deliver succinct lightning talks. They are proficient in the design aspects of presentations, from an understanding of fundamental principles related to perception and attention to creative slide creation.</p> <p><b>Social Skills:</b> Students utilize peer feedback to refine their presentation style and enhance overall communication effectiveness. At scientific conferences, they are able to navigate the social dynamics with a focus on networking strategies. They are familiar with the etiquette of professional interaction with peers, fostering collaborations, and establishing enduring connections within the scientific community.</p>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Overview of Scientific Conferences: Types and Objectives</li> <li>• Presentation Formats: Goals and Considerations</li> <li>• Abstract Writing Essentials</li> </ul>			

- Constructing a Coherent Presentation Storyline
- Conceptualizing Effective Scientific Presentations
- Proficiency in Lightning Talks and Poster Presentations
- Principles of Presentation Design
- Leveraging Peer Feedback for Improvement
- Practical Presentation Exercises

**Examinations:**

## Presentation

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

Andersen, R., & Armstrong II, D. A. (2021). Presenting statistical results effectively. Sage.

Hey, B. (2018). Präsentieren in Wissenschaft und Forschung. Springer-Verlag.

Rowe, N. (2017). Academic & scientific poster presentation. Switzerland: Springer.

Scientific colloquium			
Module abbreviation:	PBZ_Scientific colloquium	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:			
Language of instruction:	English		
Credit points / SWS:	2 ECTS / 2 SWS		
Workload:	Contact hours:	10 h	
	Self-study:	40 h	
	Total:	50 h	
Module duration:	1 Semester		
Frequency:	Winter and summer term		
Subjects of the module:			
Lecture types:	-		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Disciplinary Competence</b></p> <p><i>Develop a Deep Understanding of Research Methodologies:</i> Students will acquire in-depth knowledge of various research methodologies, enabling them to design robust empirical studies. This includes understanding the strengths and limitations of different research designs, statistical analyses, and how to apply them appropriately to their research questions.</p> <p><i>Critical Analysis of Literature:</i> Students will develop the ability to critically evaluate and synthesize research literature. This involves assessing the relevance, rigor, and contributions of existing studies, identifying gaps in the literature, and understanding the implications for their own research.</p> <p><i>Advancement of Subject Matter Expertise:</i> Students will enhance their expertise in their specific area of psychology, gaining a comprehensive understanding of the theoretical frameworks, key studies, and emerging trends. This will empower them to contribute novel insights and advancements to their field.</p> <p><b>Action Competence</b></p> <p><i>Research Project Management:</i> Students will learn to effectively plan, implement, and manage their research projects. This includes setting realistic timelines, managing resources, adhering to ethical guidelines, and adjusting project plans in response to challenges or new opportunities.</p> <p><i>Data Analysis and Interpretation:</i> Students will gain proficiency in analyzing empirical data using appropriate statistical techniques. They will learn how to interpret results in the context of their research questions, draw valid conclusions, and articulate the implications of their findings.</p>			

*Scholarly Writing and Presentation Skills:* Students will enhance their ability to communicate their research clearly and persuasively, both in written form and through oral presentations. This includes structuring research papers, writing for publication, and presenting findings at colloquia and conferences.

### **Social Skills**

*Collaborative Research Skills:* Students will develop the ability to work effectively in collaborative research settings. This includes contributing to team projects, providing and receiving constructive feedback, and managing interpersonal dynamics in research teams.

*Networking and Professional Development:* Students will learn to build and maintain professional relationships within the academic community. This involves engaging with peers, faculty, and professionals in their field, participating in academic conferences, and contributing to professional discussions.

*Ethical and Responsible Conduct in Research:* Students will understand the importance of ethical considerations in research, including issues related to confidentiality, informed consent, and the responsible reporting of results. They will be prepared to address ethical dilemmas and conduct their research with integrity.

These objectives are designed to ensure that PhD students in psychology not only gain a deep understanding of their discipline but also develop the practical skills and social competencies necessary for a successful career in research and academia.

### **Content:**

In the Research Colloquium, doctoral candidates and other researchers present the current status of their doctoral projects (or a part thereof). The audience provides feedback and engages in a discussion with the presenter, evaluating the pros and cons of the approaches presented. The aim is to support the researchers and promote scientific exchange and networking. Additionally, the event serves to practice presenting and discussing within an academic environment.

### **Examinations:**

Presentation, 15 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

### **Literature:**

American Psychological Association. (2019). Publication manual of the American Psychological Association, 7th edition. American Psychological Association (APA).

American Psychological Association. (2019). Publication manual of the American Psychological Association, 7th edition. American Psychological Association (APA). <https://www.amazon.com/Publication-Manual-American-Psychological-Association/dp/1433805618?SubscriptionId=0JYN1NVW651KCA56C102&tag=technikie-20&linkCode=xm2&camp=2025&creative=165953&creativeASIN=1433805618>

Evergreen, S. (2014). Presenting data effectively: Communicating your findings for maximum impact. SAGE.

Georgousopoulou, E. N. (2018). How to present research findings: The case of tables. *Nutrition and Health*, 24(3), 135–135. <https://doi.org/10.1177/0260106018806077>

Nicol, A. A. M., & Pexman, P. M. (2011). Presenting your findings: A practical guide for creating tables; [an educational guide based on the Publication manual of the American Psychological Association] (6. Ed). American Psychological Ass.

Pollock, T. G., & Bono, J. E. (2013). Being Scheherazade: The Importance of Storytelling in Academic Writing. *Academy of Management Journal*, 56(3), 629–634. <https://doi.org/10.5465/amj.2013.4003>

Presenting Your Research. (2024, Januar 24). SAGE Publications Ltd. <https://uk.sagepub.com/en-gb/eur/presenting-your-research/book241772>

Prinstein, M. J. (Hrsg.). (2013). *The Portable Mentor: Expert Guide to a Successful Career in Psychology*. Springer. <https://doi.org/10.1007/978-1-4614-3994-3>

Udovicich, C., Kasivisvanathan, V., & Winchester, C. L. (2017). Communicating your research (part 1) – to the scientific community. *Journal of Clinical Urology*, 10(4), 396–399.  
<https://doi.org/10.1177/2051415816668941>

Teaching Skills			
Module abbreviation:	PBZ_Teaching Skills	Module-no.:	
Curriculum:	<b>Programme</b>	<b>Semester</b>	
	Promotionsbegleitzertifikat (SPO WS 23/24)	1	
Responsible for module:	Prof. Dr.-Ing. Michael Walter		
Language of instruction:	Deutsch		
Credit points / SWS:	3 ECTS / 3 SWS		
Workload:	Contact hours:	20 h	
	Self-study:	55 h	
	Total:	75 h	
Module duration:	1 Semester		
Frequency:	only winter term		
Subjects of the module:			
Lecture types:	seminar/exercise		
Prerequisite for participation:	According to SPO or Study plan		
Recommended prerequisites:	none		
Usability:	Promotionsbegleitstudium		
<b>Objectives:</b>			
<p><b>Knowledge:</b></p> <p><b>Knowledge:</b> As part of the module, students acquire knowledge for the planning, organization, implementation and follow-up of teaching sequences. They learn about the skills of a teacher, various didactic approaches and tools for online and face-to-face teaching. The main teaching content is the systematic and methodical approach to developing a teaching sequence.</p> <p><b>Understanding:</b> Students understand the importance of didactics as a field of research in its own right and how central good teaching is to successful learning.</p> <p><b>Apply:</b> Students will test the skills they have learned by designing their own teaching sequence.</p> <p><b>Analyze:</b> After attending the module, students will be able to initiate, analyze, structure and continue didactic concepts. They will also be able to analyze teaching contexts and select and apply didactically appropriate methods and tools.</p> <p><b>Evaluation:</b> Based on the knowledge gained, the methods learned and the experience gained from practical application in the planning, organization and implementation of teaching sequences, students are able to assess the suitability of the methods and tools for unfamiliar problems and new teaching situations. In addition, they will be able to critically question the organization, learning content and methodical implementation of teaching courses, identify and correct any problems that arise and finally define important principles of didactic teaching.</p>			

**Create:** Students are enabled by what they have learned to design and implement complete and consistent teaching sequences to convey their research content. In addition, students are able to use the methodological approaches they have learned and to document what they have learned.

**Action Competence:**

Students are enabled to independently design and implement a teaching sequence using various methods and tools they have learned. In addition, students will be able to organize their work independently and adhere to learning objectives. The ability to objectively assess and reflect on their own strengths and weaknesses both professionally (e.g. implementation of the methods learned) and socially (e.g. development of solutions and compromises in an interdisciplinary team) is acquired.

**Social skills:**

Students work independently in small groups to organize the processing of exercises and required activities as part of the module and jointly develop proposed solutions for the tasks. Lecturers and fellow students provide appreciative feedback in the joint discussion of the solutions developed.

**Content:**

There are ten different learning units, two of which are used to implement the teaching sequences:

- Basic didactics
- Social skills as a teacher
- Interlinking teaching & learning in a new way
- Planning & managing a course
- Activating methods for online & face-to-face teaching
- Interaction with the tools Zoom & Kahoot
- First implementation of a teaching sequence
- Safe handling of A/V technology
- Moderation
- Final implementation of teaching sequence

**Examinations:**

Presentation, 15 minutes (outside the examination period)

The prerequisite for the awarding of credit points is the passing of the respective module examination in accordance with the SPO or Study plan.

**Literature:**

Kerres, M. (2018). Mediendidaktik. Konzeption und Entwicklung digitaler Lernangebote. Oldenbourg: De Gruyter, 5. Auflage, ISBN: 9783110456837.

Mörth, M., Prausa, J., Bernhard, N., Watermann, R. (Hg.), Evidenzbasierte Hochschullehre - Verbindungslinien zwischen Forschung & hochschuldidaktischer Praxis, 1. Aufl., Bd. 7. in die hochschullehre, Themenheft 2021, vol. 7, wbv Publikation. Zugegriffen: 4. Oktober 2023. [Online]. Verfügbar unter: <https://www.wbv.de/shop/Evidenzbasierte-Hochschullehre-Verbindungslienien-zwischen-Forschung-hochschuldidaktischer-Praxis-6004844w>

Müller, M. W. M. (2022). Wissensmanagement klipp & klar, Springer, ISBN: 978-3-658-38308-4.

Watzka, K. (2016). Objectives formulieren: Erfolgsvoraussetzungen wirksamer Zielvereinbarungen. Wiesbaden: Springer, 1. Auflage, ISBN: 9783658122737.