Subdivided Module Catalogue

for the Subject

Digital Humanities

as a degree subject in a Bacheor's degree programme with 2 majors

(75 ECTS credits)

Examination regulations version: 2024
Responsible: Faculty of Arts, Historical, Philological, Cultural and Geographical Studies
Responsible: Chair of Digital Humanities and German Literature of the Modern Period

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Digital Humanities
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Learning Outcomes

German contents and learning outcome available but not translated yet.

Fachliche Ziele

- Die Absolventinnen und Absolventen haben ein solides Überblickswissen über die Grundprinzipien der Digital Humanities, sie können inhaltliche Strukturen von Texten beschreiben und mittels standardisierter Auszeichnungssprachen kodieren, sie kennen zentrale Begriffe und Konzepte der Datenmodellierung und haben die Fähigkeit, diese selbständig zu verwenden.
- Die Absolventinnen und Absolventen verfügen über ein solides Grundwissen in der algorithmischen Prozessierung und der Anwendung von mindestens zwei Programmiersprachen.
- Die Absolventinnen und Absolventen haben geistes- und kulturwissenschaftliche Grundkenntnisse, die weit über das zweite BA-Fach hinausgehen, sowie die Fähigkeit, digitale Ressourcen zu erstellen, zu bearbeiten und zur Beantwortung fachspezifischer Fragen heranzuziehen.
- Die Absolventinnen und Absolventen verfügen über eine vertiefte Kenntnis ausgewählter Forschungsmethoden der Digital Humanities und die Fähigkeit, fachspezifische Fragestellungen so zu operationalisieren, dass sie mit digitalen Bibliotheken und Informationssystemen beantwortet werden können.

Befähigung, eine qualifizierte Erwerbstätigkeit aufzunehmen

- Die Absolventinnen und Absolventen besitzen die Fähigkeit, Fragestellungen der Digital Humanities zu analysieren, Verfahren zu deren Lösung zu entwickeln und in entsprechenden Arbeitsschritten umzusetzen.
- Die Absolventinnen und Absolventen können statistische Verfahren zur Lösung geistes- oder kulturwissenschaftlicher Fragestellungen heranzuziehen.
- Die Absolventinnen und Absolventen kennen die apparativen, personellen und organisatorischen Notwendigkeiten eines Digitalisierungsprojektes.
- Die Absolventinnen und Absolventen besitzen die Fähigkeit, Problemzusammenhänge in mündlicher wie schriftlicher Form sachgerecht aufzubereiten und - unter Medieneinsatz - zielgruppenspezifisch zu vermitteln.

Befähigung zum gesellschaftlichen Engagement

- Die Absolventinnen und Absolventen können gesellschaftliche und kulturelle Entwicklungen, Themen und Positionen in ihrer sprachlichen Verfasstheit und darüber hinaus reflektieren und analysieren. Sie sind in der Lage, sich in einer zunehmend komplexer werdenden Welt zu orientieren und eine Wertvorstellung für das eigene Denken und Handeln zu entwickeln.
- Die Absolventinnen und Absolventen sind in der Lage, geistes- und kulturwissenschaftliche Fragestellungen in die andere Diskurswelt der Informatik zu transferieren. Diese Vermittlerrolle trägt dazu bei, die eigene soziale, kulturgeschichtliche wie geschlechtliche Herkunft kritisch zu reflektieren.

Persönlichkeitsentwicklung

- Die Absolventinnen und Absolventen sind zur selbstständigen und kritischen Reflexion in der Lage und haben gelernt, ihre eigene Position im Dialog mit anderen zu finden, schriftlich und mündlich zu präsentieren und selbstkritisch zu hinterfragen.

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Abbreviations used

Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V** = lecture

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B/NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

Conventions

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Notes

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should the module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with

the general regulations governing the degree subject described in this module catalogue:

> **ASPO2015**

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

> **17-Apr-2024 (2024-53)**

> **21-May-2025 (2025-46)**

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

Subdivided Module Catalogue for the Subject
Digital Humanities
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UNIVERSITÄT WÜRZBURG
Julius-Maximilians-

The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses (60 ECTS credits)				
04-DH-A1-152-m01	Digital Humanities in Overview	5	B/NB	5
04-DH-A4-242-m01	Programming and Algorithmic Thinking	5	B/NB	7
04-DH-A5-242-m01	Data Modelling and Text Encoding	5	B/NB	8
04-DH-A6-242-m01	Data Preparation and Annotation	5	NUM	9
10-M-EHM-242-m01	Introduction to Advanced Mathematics	10	B/NB	24
10-I-IDS-242-m01	Introduction to Data Science	5	NUM	22
10-I-EAV-242-m01	Introduction to Audio Processing	5	NUM	19
10-I-TA-242-m01	Text Analysis	5	NUM	23
04-DH-B3-242-m01	Free Choice of Project in the Digital Field	10	NUM	11
10-I-GML-242-m01	Practical Foundations of Machine Learning	5	NUM	21
Compulsory Electives (15 ECTS credits)				
04-DH-C1-242-m01	Digital Editions and Corpora	5	NUM	13
04-DH-C4-152-m01	Data Base	5	NUM	14
04-DH-C5-152-m01	Simulation	5	NUM	15
04-DH-C7-242-m01	Visualization	5	NUM	16
10-I-EBV-242-m01	Introduction to Image Processing	5	NUM	20
04-DH-C8-251-m01	Special Topics in Digital Humanities	5	NUM	17
Thesis (10 ECTS credits)				
04-DH-BA-152-m01	Bachelor Thesis Digital Humanities	10	NUM	12
Key Skills Area				
In the two degree subjects, students must achieve a total of 20 ECTS credits in the area of transferable skills. Of these, a total of 5 ECTS credits must be achieved in the two subjects in the area of general transferable skills and a total of 15 ECTS credits (no less than 5 ECTS credits per subject) must be achieved in the two subjects in the area of subject-specific transferable skills.				
General Key Skills				
Subject-specific Key Skills (5 ECTS credits)				
04-DH-FSQ1-242-m01	Digitalisation	5	B/NB	18
04-DH-B2-242-m01	Research Design	5	NUM	10

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Digital Humanities in Overview	04-DH-A1-152-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	(not) successfully completed	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Overview of the discipline of digital humanities with a focus on abstraction, formalisation and data modelling as well as text encoding, the digital library and applications in the humanities.

Intended learning outcomes

Students are familiar with the core principles of digital humanities and have gained an overview of the discipline.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + T (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Master's degree (1 major) Media Communication (2015)
Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015)
Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (Minor, 2015)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2015)
Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015)
Bachelor's degree (2 majors) Digital Humanities (2015)
Master's degree (1 major) General and Applied Linguistics (2016)
Master's degree (1 major) Media Communication (2016)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2016)
Master's degree (1 major) Media Communication (2018)
Bachelor's degree (2 majors) Classical Archaeology (2018)
Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2018)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2018)

Subdivided Module Catalogue for the Subject
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Bachelor's degree (2 majors) Digital Humanities (2018)
Master's degree (1 major) Media Communication (2019)
Bachelor's degree (1 major, 1 minor) European Ethnology (Minor, 2020)
Bachelor's degree (2 majors) European Ethnology (2020)
Bachelor's degree (1 major, 1 minor) Auxiliary Sciences of History (Minor, 2021)
Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022)
Master's degree (1 major) Media Entertainment (2022)
Master's degree (1 major) Psychology of digital media (2022)
Master's degree (1 major) General and Applied Linguistics (2022)
Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022)
Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023)
Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (Minor, 2023)
Bachelor's degree (1 major) Indology/South Asian Studies (2024)
Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024)
Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)
Bachelor's degree (1 major) Human-Computer-Interaction (2024)
Bachelor's degree (1 major) Classics (2024)
Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Programming and Algorithmic Thinking	04-DH-A4-242-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	(not) successfully completed	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Introduction to the basic concepts of programming and algorithmic thinking (breaking down a task into sub-steps). Use of important programming tools, as well as existing libraries and their documentation.

Intended learning outcomes

Students should be able to solve simple programming problems independently and be able to use existing libraries for more complex problems.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) presentation (20 to 30 minutes) with written elaboration (3 to 5 pages) or
b) written examination (45 to 60 minutes) or
c) oral examination (approx. 20 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year,summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Data Modelling and Text Encoding	04-DH-A5-242-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	(not) successfully completed	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Overview of the basics of data modeling and overview of important models, e.g. relational databases, XML, and graphs. Basic methods of coding thematic and formal structures in texts using TEI as an example. Teaching. Practical skills in data modeling and in dealing with text coding.

Intended learning outcomes

Students are familiar with key terms and selected approaches to data modeling, e.g. relational databases and XML, and can use these on their own. Students are familiar with the TEI markup language and are able to apply it to texts.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)
Bachelor's degree (1 major) Classics (2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Data Preparation and Annotation	04-DH-A6-242-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Collect and prepare data (e.g. deal with missing data, standardize data types) and annotate data (develop annotation schema, deal with annotation guidelines, annotate, compare annotations)

Intended learning outcomes

Carry out and present the steps from data collection to data processing and annotation in a principled manner.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
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Module title			Abbreviation
Research Design			04-DH-B2-242-m01

Module coordinator		Module offered by	
holder of the Chair of Digital Humanities and German Literature of the Modern Period		Chair of Digital Humanities and German Literature of the Modern Period	

ECTS	Method of grading	Only after succ. compl. of module(s)	
5	numerical grade	--	

Duration	Module level	Other prerequisites	
1 semester	undergraduate	--	

Contents

Overview of the individual steps of the research design from the formulation of hypotheses within the framework of a theory to the definition of terms and variables as well as operationalization to data collection and analysis.

Intended learning outcomes

Ability to develop a research plan for a given problem from the field of DH and to justify and carry out the individual steps.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

approx. 5 exercises (15 to 20 hours total) and term paper (10 to 12 pages)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

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Module title			Abbreviation
Free Choice of Project in the Digital Field			04-DH-B3-242-m01

Module coordinator		Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period		Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Practical implementation of the knowledge acquired in the Digital Humanities degree program.

Intended learning outcomes

Students are able to work on a problem in the Digital Humanities, develop methods to solve it and implement the solution in appropriate work steps and present the results.

Courses (type, number of weekly contact hours, language — if other than German)

R (o)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

wrap-up report (15 to 20 pages)
Language of assessment: German and/or English

Allocation of places

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Additional information

project external to JMU

Workload

300 h

Teaching cycle

Teaching cycle: once a year, winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
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Module title	Abbreviation
Bachelor Thesis Digital Humanities	04-DH-BA-152-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Independently researching and writing on a topic in the digital humanities that was selected in consultation with an authorised examiner or (in the case of an interdisciplinary thesis) with two authorised examiners.

Intended learning outcomes

Students are able to:
- independently write an academic paper (define and analyse a problem, conduct a literature search, employ relevant methods, refer to relevant theories, interpret data, draw logical conclusions and offer approaches to the solution of said problem).
- work to deadlines.
- prepare an appropriate written account of the results of their work.

Courses (type, number of weekly contact hours, language — if other than German)

No courses assigned to module

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Bachelor's thesis (approx. 30 pages)
Language of assessment: German and/or English

Allocation of places

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Additional information

Time to complete: 10 weeks.

Workload

300 h

Teaching cycle

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2015)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2016)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2018)
Bachelor's degree (2 majors) Digital Humanities (2018)
Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)

Subdivided Module Catalogue for the Subject
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Module title	Abbreviation
Digital Editions and Corpora	04-DH-C1-242-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Introduction to the principles of creating and designing digital editions and corpora and their use in subject-specific research contexts.

Intended learning outcomes

Students can create digital editions and corpora and use them to answer subject-specific questions.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) exercises (approx. 10 to 15 pages) or
b) presentation (approx. 20 to 30 minutes) with written elaboration (approx. 3 to 5 pages) or
c) written examination (approx. 45 to 60 minutes) or
d) oral examination (approx. 20 minutes) or
e) term paper (approx. 10 to 12 pages) or
f) practical project (e. g. transcription, encoding and web publication of (approx. 3 to 5) letters)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every two years, if announced

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
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Module title	Abbreviation
Data Base	04-DH-C4-152-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Introduction to creating and editing databases as well as their use in the humanities.

Intended learning outcomes

Students are able to create databases and to use them to answer research questions from the humanities.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) Exercises (approx. 10 to 15 pages) or
b) presentation (approx. 20 to 30 minutes) with written elaboration (approx. 3 to 5 pages) or
c) written examination (approx. 45 to 60 minutes) or
d) oral examination (approx. 20 minutes) or
e) term paper (approx. 10 to 12 pages) or
f) practical project (e. g. transcription, encoding and web publication of (approx. 3 to 5) letters)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2015)
Bachelor's degree (2 majors) Digital Humanities (2015)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2016)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2018)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2018)
Bachelor's degree (2 majors) Digital Humanities (2018)
Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
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Module title			Abbreviation
Simulation			04-DH-C5-152-m01

Module coordinator		Module offered by	
holder of the Chair of Digital Humanities and German Literature of the Modern Period		Chair of Digital Humanities and German Literature of the Modern Period	

ECTS	Method of grading	Only after succ. compl. of module(s)	
5	numerical grade	--	

Duration	Module level	Other prerequisites	
1 semester	undergraduate	--	

Contents

Introduction to creating simulations as well as their use in the humanities and cultural studies.

Intended learning outcomes

Students are able to create simulations and to use them to answer research questions from the humanities.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) Exercises (approx. 10 to 15 pages) or
b) presentation (approx. 20 to 30 minutes) with written elaboration (approx. 3 to 5 pages) or
c) written examination (approx. 45 to 60 minutes) or
d) oral examination (approx. 20 minutes) or
e) term paper (approx. 10 to 12 pages) or
f) practical project (e. g. transcription, encoding and web publication of (approx. 3 to 5) letters)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2015)
Bachelor's degree (2 majors) Digital Humanities (2015)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2016)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2018)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2018)
Bachelor's degree (2 majors) Digital Humanities (2018)
Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
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Module title	Abbreviation
Visualization	04-DH-C7-242-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

Introduction to the principles of visualization and overview of reliable strategies for visualizing data types such as statistical data, distributions, text, graphs, etc.

Intended learning outcomes

Ability to justify the selection of a visualization strategy for given data and the practical skills to implement the chosen visualization strategy.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) exercises (approx. 10 to 15 pages) or
b) presentation (approx. 20 to 30 minutes) with written elaboration (approx. 3 to 5 pages) or
c) written examination (approx. 45 to 60 minutes) or
d) oral examination (approx. 20 minutes) or
e) term paper (approx. 10 to 12 pages) or
f) practical project (e. g. transcription, encoding and web publication of (approx. 3 to 5) letters)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every two years, if announced

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Special Topics in Digital Humanities	04-DH-C8-251-m01

Module coordinator	Module offered by
holder of the Chair of Digital Humanities and German Literature of the Modern Period	Chair of Digital Humanities and German Literature of the Modern Period

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

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Intended learning outcomes

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Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) exercises (approx. 10 to 15 pages) or
b) presentation (approx. 20 to 30 minutes) with written elaboration (approx. 3 to 5 pages) or
c) written examination (approx. 45 to 60 minutes) or
d) oral examination (approx. 20 minutes) or
e) term paper (approx. 10 to 12 pages) or
f) practical project (e. g. transcription, encoding and web publication of (approx. 3 to 5) letters)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every two years, if announced

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2015)
Bachelor's degree (2 majors) Digital Humanities (2015)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2016)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2018)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2018)
Bachelor's degree (2 majors) Digital Humanities (2018)
Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Digitalisation	04-DH-FSQ1-242-m01

Module coordinator	Module offered by
head of Digitalisation Unit	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	(not) successfully completed	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

The module provides an overview of the field of digitalissation with a focus on practical examples. The focus is on image and text digitalisation, in particular on methods of automatic text recognition of prints (OCR) and hand-written manuscripts (HTR). Beyond the necessary basics in the field of image processing and text coding, the legal aspects of digitalisation will be covered.

Intended learning outcomes

Students are familiar with central methods of text and image digitalization and the associated methodological foundations. They have practical experience with current text recognition tools and are familiar with legal aspects in the field of digitised resources.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) exercises (approx. 10 to 15 pages) or
b) presentation (approx. 20 to 30 minutes) with written elaboration (approx. 3 to 5 pages) or
c) written examination (approx. 45 to 60 minutes) or
d) oral examination (approx. 20 minutes) or
e) term paper (approx. 10 to 12 pages) or
f) practical project (e. g. transcription, encoding and web publication of (approx. 3 to 5) letters)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Introduction to Audio Processing	10-I-EAV-242-m01

Module coordinator	Module offered by
holder of the Professorship for Computer Science (Computational Humanities)	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

This lecture introduces digital audio data processing and analysis, covering the following topics: Basic properties of audio data, audio signal processing (especially time-frequency transforms), selected machine-learning methods, main application areas (speech, music, environmental sounds), typical tasks (classification, detection, analysis) and algorithmic approaches

Intended learning outcomes

The students have a fundamental understanding of audio data as well as theoretical and practical knowledge in audio signal processing and specialized machine-learning methods. They have gained experience with typical analysis tasks and are able to understand, adapt and apply corresponding algorithms.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (1)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) presentation (20 to 30 minutes) with written elaboration (3 to 5 pages) or
b) written examination (45 to 60 minutes) or
c) oral examination (approx. 20 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title		Abbreviation
Introduction to Image Processing		10-I-EBV-242-m01

Module coordinator	Module offered by
holder of the Professorship for Computer Science (Computational Humanities)	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

This lecture introduces digital image processing and analysis, covering the following topics: Basic properties of image data, image acquisition, signal processing (especially filters and transforms), image compression, main application areas (documents, photos, ...), typical tasks in image processing and analysis and algorithmic approaches, including selected machine learning methods

Intended learning outcomes

The students have a fundamental understanding of image data as well as theoretical and practical knowledge in image processing and specialized machine-learning methods. They have gained experience with typical analysis tasks and are able to understand, adapt and apply corresponding algorithms.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (1)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) presentation (20 to 30 minutes) with written elaboration (3 to 5 pages) or
b) written examination (approx. 60 minutes) or
c) oral examination (approx. 20 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Practical Foundations of Machine Learning	10-I-GML-242-m01

Module coordinator	Module offered by
holder of the Professorship for Computer Science (Computational Humanities)	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

This lecture introduces the conceptual foundations of machine learning and covers the following topics: Knowledge representation, training paradigms (supervised, unsupervised, reinforcement, mixed forms), data preparation and experimental design (training/validation/test), evaluation (cross-validation), generalization and robustness, interpretability, typical models (regression, k-means, SVM, random forest, neural networks)

Intended learning outcomes

The students have a fundamental understanding of machine learning as well as theoretical and practical knowledge of typical methods, procedures, and models.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (1)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) presentation (20 to 30 minutes) with written elaboration (3 to 5 pages) or
b) written examination (45 to 60 minutes) or
c) oral examination (approx. 20 minutes)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title		Abbreviation
Introduction to Data Science		10-I-IDS-242-m01

Module coordinator	Module offered by
holder of the Chair of Computer Science XII (Natural Language Processing)	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

This course introduces practically oriented lectures that introduce the core principles and methods of data science, including: data collection and preprocessing, descriptive analysis and visualization of data, predictive data analysis, working with special data types such as images, text, and graphs/networks, statistical testing of results obtained with methods working on data, and ethical aspect of data science (e.g., biases and fairness).

Intended learning outcomes

The students have a fundamental understanding of a practical data science pipeline and are able to successfully carry out meaningful real-world data science work, starting from (i) posing the research question that is to be answered with data-based evidence, over (ii) explorative analysis of the data and proposing the most suitable methodological approach for the task at hand, to (iii) analyzing the results, their statistical strength, and implications thereof.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (1)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) presentation (20 to 30 minutes) with written elaboration (3 to 5 pages) or
b) written examination (45 to 60 minutes) or
c) oral examination (approx. 20 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title		Abbreviation
Text Analysis		10-I-TA-242-m01

Module coordinator	Module offered by
holder of the Chair of Computer Science XII (Natural Language Processing)	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	undergraduate	--

Contents

This lecture introduces methods for processing of and working with text data. Topically, the lecture will cover computational representations of text, text classification and clustering methods, approaches and models for syntactic analysis of text, algorithms for extracting information from text, methods for modeling text meaning (i.e., semantics), and approaches to evaluate the performance of text processing methods. The course will also introduce a number of machine learning models commonly used in text processing tasks.

Intended learning outcomes

The students have a fundamental understanding of processing text data as well as theoretical and practical knowledge in specialized machine-learning methods for text processing. They have gained experience with typical text analysis tasks and are able to understand, adapt and apply corresponding and algorithms.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (1)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) presentation (20 to 30 minutes) with written elaboration (3 to 5 pages) or
b) written examination (45 to 60 minutes) or
c) oral examination (approx. 20 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: once a year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (Minor, 2024)

Subdivided Module Catalogue for the Subject
Digital Humanities
Bacheor's degree programme with 2 majors, 75 ECTS credits

Module title	Abbreviation
Introduction to Advanced Mathematics	10-M-EHM-242-m01

Module coordinator	Module offered by
Dean of Studies Mathematik (Mathematics)	Institute of Mathematics

ECTS	Method of grading	Only after succ. compl. of module(s)
10	(not) successfully completed	--

Duration	Module level	Other prerequisites
2 semester	undergraduate	--

Contents

The lecture provides an introduction and in-depth study of higher mathematics and covers the following topics: Complex numbers, functions and their properties, limits and continuity of functions, differential calculus, systems of linear equations, vectors and matrices, eigenvalues and eigenvectors; differential calculus of several variables (especially applications as well as advanced topics); basics of probability theory

Intended learning outcomes

Students develop a basic understanding of higher mathematics and can deepen their knowledge based on this understanding in the second part of the course. They are able to apply their theoretical knowledge and the methods they have learned to different contexts.

Courses (type, number of weekly contact hours, language — if other than German)

V (4) + Ü (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) written examination (60 to 120 minutes) or
b) oral examination of one candidate each or in groups of up to 2 candidates (15 to 30 minutes per candidate) or
c) project work (e. g. written solutions and corresponding explanations, 10 to 15 pages total)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

300 h

Teaching cycle

Teaching cycle: once a year, winter semester + summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (2 majors) Digital Humanities (2024)
Bachelor's degree (1 major, 1 minor) Digital Humanities (2024)