

# Module Catalogue

for the Subject

## Digital Humanities

as a Master's with 1 major  
with the degree "Master of Arts"  
(120 ECTS credits)

Examination regulations version: 2016  
Responsible: Faculty of Arts, Historical, Philological, Cultural and Geographical  
Studies  
Responsible: Institute of German Studies  
Responsible: Chair of Digital Humanities and German Literature of the Modern  
Period

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## The subject is divided into

section / sub-section	ECTS credits	starting page
Compulsory Courses	70	6
Compulsory Electives	20	20
Thesis	30	30

## Learning Outcomes

German contents and learning outcome available but not translated yet.

### Fachliche Ziele

- Die Absolventinnen und Absolventen können geistes- und kulturwissenschaftliches Wissen modellieren, daraus digitale Objekte erstellen und schließlich präsentieren. Sie beherrschen anspruchsvolle digitale geisteswissenschaftliche Werkzeuge, können digitale Textobjekte algorithmisch prozessieren und analysieren und - auch in großer Zahl - verwalten.
- Die Absolventinnen und Absolventen besitzen die Fähigkeit, Fragestellungen der Digital Humanities im Kontext der aktuellen Forschung zu operationalisieren, einen Workflow zu ihrer Beantwortung zu konzipieren, die nötigen Arbeitsschritte (s. o.) durchzuführen und das gesamte Projekt zu dokumentieren.

### 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 Problemzusammenhänge in mündlicher wie schriftlicher Form sachgerecht aufbereiten und - unter Medieneinsatz - zielgruppenspezifisch vermitteln.
- Durch die Auswahl bestimmter Module aus dem Wahlpflichtbereich kann ein Schwerpunkt "Data Science" gebildet werden. Ein entsprechendes Zertifikat ist in Vorbereitung (Herbst 2020).

### 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.
- Den Absolventinnen und Absolventen stand die Möglichkeit offen, im Rahmen eines Auslandsaufenthalts internationale und interkulturelle Kompetenzen zu sammeln und eine interkulturelle Sensibilisierung zu erreichen.

## 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)):

**04-Apr-2016 (2016-53)**

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.

## Compulsory Courses

(70 ECTS credits)

Module title		Abbreviation
Creating Digital Objects 1		04-DH-G-1-162-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	graduate	--
Contents		
Advanced methods of creation and management of digital objects and their presentation. Sophisticated techniques and markup methods.		
Intended learning outcomes		
Students are able to create and annotate digital objects and to select and use appropriate standards with respect to efficiency and sustainability.		
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 is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) presentation (approx. 15 minutes) and term paper (approx. 5 pages) or c) exercises (4 out of 6, approx. 2 pages each) Language of assessment: German and/or English		
Allocation of places		
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Additional information		
--		
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		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Creating Digital Objects 2		04-DH-G-2-162-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	graduate	--
Contents		
Advanced methods of creation and management of digital objects and their presentation. Sophisticated techniques and markup methods.		
Intended learning outcomes		
Students are able to create and annotate digital objects and to select and use appropriate standards with respect to efficiency and sustainability.		
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 is creditable for bonus)		
term paper (15 to 20 pages) Language of assessment: German and/or English		
Allocation of places		
--		
Additional information		
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Workload		
150 h		
Teaching cycle		
--		
Referred to in LPO I (examination regulations for teaching-degree programmes)		
--		
Module appears in		
Master's degree (1 major) Digital Humanities (2016)		



Module title		Abbreviation
Presenting Digital Objects 1		04-DH-H-1-162-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	graduate	--
Contents		
Fundamentals of human-computer interaction (HCI), visualisation of information structures, presentation of texts using digital media.		
Intended learning outcomes		
Students are able to develop and technically implement visualisation concepts for digital objects and, in particular, for 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 is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) presentation (approx. 15 minutes) and term paper (approx. 5 pages) or c) exercises (4 out of 6, approx. 2 pages each) 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		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Presenting Digital Objects 2		04-DH-H-2-162-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	graduate	--
Contents		
Fundamentals of human-computer interaction (HCI), visualisation of information structures, presentation of texts using digital media.		
Intended learning outcomes		
Students are able to develop and technically implement visualisation concepts for digital objects and, in particular, for 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 is creditable for bonus)		
term paper (15 to 20 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		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Practice of Digital Objects 1		04-DH-I-1-162-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	graduate	--
<b>Contents</b>		
Application of complex software libraries, advanced programming techniques.		
<b>Intended learning outcomes</b>		
Students are able to use complex software libraries and to independently develop problem solutions.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
S (2) Module taught in: German and/or English		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) presentation (approx. 15 minutes) and term paper (approx. 5 pages) or c) exercises (4 out of 6, approx. 2 pages each) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Practice of Digital Objects 2		04-DH-I-2-162-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	graduate	--
<b>Contents</b>		
Application of complex software libraries, advanced programming techniques.		
<b>Intended learning outcomes</b>		
Students are able to use complex software libraries and to independently develop problem solutions.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
S (2) Module taught in: German and/or English		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
term paper (15 to 20 pages) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Processing and Analyzing of Digital Objects 1		04-DH-J-1-162-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	graduate	--
Contents		
Work on exemplary research questions using methods of the digital humanities, analysis of digital objects.		
Intended learning outcomes		
Students are able to answer research questions using computer-based methods and to analyse digital objects.		
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 is creditable for bonus)		
term paper (15 to 20 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		
--		
Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Processing and Analyzing of Digital Objects 2		04-DH-J-2-162-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	graduate	--
<b>Contents</b>		
Work on exemplary research questions using methods of the digital humanities, analysis of digital objects.		
<b>Intended learning outcomes</b>		
Students are able to answer research questions using computer-based methods and to analyse digital objects.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
S (2) Module taught in: German and/or English		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) presentation (approx. 15 minutes) and term paper (approx. 5 pages) or c) exercises (4 out of 6, approx. 2 pages each) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
<b>Managing Digital Objects 1</b>		04-DH-K-1-162-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	graduate	--
Contents		
Project management, virtual research environments, scientific content management systems, digital library and digital information systems.		
Intended learning outcomes		
Students are familiar with selected state-of-the-art virtual research environments and research data repositories. They are also familiar with the fundamental principles of professional project management and are able to model typical workflows using these means.		
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 is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) presentation (approx. 15 minutes) and term paper (approx. 5 pages) or c) exercises (4 out of 6, approx. 2 pages each) 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		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Managing Digital Objects 2		04-DH-K-2-162-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	graduate	--
<b>Contents</b>		
Project management, virtual research environments, scientific content management systems, digital library and digital information systems.		
<b>Intended learning outcomes</b>		
Students are familiar with selected state-of-the-art virtual research environments and research data repositories. They are also familiar with the fundamental principles of professional project management and are able to model typical workflows using these means.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
S (2) Module taught in: German and/or English		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
term paper (15 to 20 pages) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Digital Humanities (2016)		



Module title		Abbreviation
<b>Modelling Digital Objects 1</b>		o4-DH-L-1-162-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	graduate	--
Contents		
Advanced concepts of data modelling, evaluation of complex digital objects.		
Intended learning outcomes		
Students are able to model digital objects semantically and assess them from the perspective of a humanities discipline.		
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 is creditable for bonus)		
a) written examination (approx. 60 minutes) or b) presentation (approx. 15 minutes) and term paper (approx. 5 pages) or c) exercises (4 out of 6, approx. 2 pages each) Language of assessment: German and/or English		
Allocation of places		
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Additional information		
--		
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		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
<b>Modelling Digital Objects 2</b>		04-DH-L-2-162-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	graduate	--
<b>Contents</b>		
Advanced concepts of data modelling, evaluation of complex digital objects.		
<b>Intended learning outcomes</b>		
Students are able to model digital objects semantically and assess them from the perspective of a humanities discipline.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
S (2) Module taught in: German and/or English		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
term paper (15 to 20 pages) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Digital Humanities (2016)		

Module title		Abbreviation
Project in Digital Humanities		04-DH-M-162-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	(not) successfully completed	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
Practical application of the knowledge and skills developed in the Bachelor's programme Digital Humanities to a defined research project.		
Intended learning outcomes		
Students are able to define a research problem, develop integratable methods to solve the problem and implement these methods in appropriate steps.		
Courses (type, number of weekly contact hours, language — if other than German)		
R (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 is creditable for bonus)		
project (25 to 30 pages) Language of assessment: German and/or English		
Allocation of places		
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Additional information		
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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		
Master's degree (1 major) Digital Humanities (2016)		

## Compulsory Electives

(20 ECTS credits)

Module title		Abbreviation
Data Mining		10-I=DM-161-m01
Module coordinator		Module offered by
Dean of Studies Informatik (Computer Science)		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	graduate	--
Contents		
Foundations in the following areas: definition of data mining and knowledge discovery in databases, process model, relationship to data warehouse and OLAP data preprocessing, data visualisation, unsupervised learning methods (cluster- and association methods), supervised learning (e. g. Bayes classification, KNN, decision trees, SVM), learning methods for special data types, further learning paradigms.		
Intended learning outcomes		
The students possess a theoretical and practical knowledge of typical methods and algorithms in the area of data mining and machine learning. They are able to solve practical knowledge discovery problems with the help of the knowledge acquired in this course and by using the KDD process. They have acquired experience in the use or implementation of data mining algorithms.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Separate written examination for Master's students. Language of assessment: German and/or English creditable for bonus		
Allocation of places		
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Additional information		
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT, IS, HCI, GE.		
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		
Master's degree (1 major) Computer Science (2016) Master's degree (1 major) Digital Humanities (2016) Master's degree (1 major) Computer Science (2017) Master's degree (1 major) Computer Science (2018)		

Module title		Abbreviation
Introduction into Human-Computer Interaction		10-I=HCI-161-m01
Module coordinator		Module offered by
holder of the Chair of Computer Science IX		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	graduate	--
Contents		
<p>Human-Computer Interaction is concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them. This course gives an introduction into the principle biological, physiological, and psychological constraints as defined by the human user and relates these constraints to the conceptual and technical solutions of today's computer systems and existing as well as prospective interaction metaphors between humans and computers.</p> <p>The course covers topics about human perception and cognition, memory and attention, the design of interactive systems, prominent evaluation methods, the principles of computer systems, typical input processing techniques, interface technology, and examples of typical interaction metaphors, from text-based input to graphical desktops to multimodal interfaces. Accompanying lab-work will introduce students to typical tasks involved in this field, i.e., prominent evaluation methods and prototyping of interfaces.</p>		
Intended learning outcomes		
After the course, the students will have a broad understanding of the underlying principles of human users and computer systems. They will understand the constraints and capabilities of current user interfaces and they will learn about the necessary steps applied in user-centered design and development approaches.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (3) + Ü (1)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
<p>presentation of project results (approx. 30 minutes)</p> <p>Language of assessment: German and/or English</p> <p>creditable for bonus</p>		
Allocation of places		
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Additional information		
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI.		
Workload		
150 h		
Teaching cycle		
--		
Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
<p>Master's degree (1 major) Computer Science (2016)</p> <p>Master's degree (1 major) Digital Humanities (2016)</p> <p>Master's degree (1 major) Computer Science (2017)</p> <p>Master's degree (1 major) Computer Science (2018)</p> <p>Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)</p> <p>Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)</p>		
Master's with 1 major Digital Humanities (2016)	JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record Master (120 ECTS) Digital Humanities - 2016	page 22 / 31

Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)  
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

Module title		Abbreviation
Information Retrieval		10-I=IR-161-m01
Module coordinator		Module offered by
Dean of Studies Informatik (Computer Science)		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	graduate	--
Contents		
IR models (e. g. Boolean and vector space model, evaluation), processing of text (tokenising, text properties), data structures (e. g. inverted index), query elements (e. g. query operations, relevance feedback, query languages and paradigms, structured queries), search engine (e. g. architecture, crawling, interfaces, link analysis), methods to support IR (e. g. recommendation systems, text clustering and classification, information extraction).		
Intended learning outcomes		
The students possess theoretical and practical knowledge in the area of information retrieval and have acquired the technical know-how to create a search engine.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus		
Allocation of places		
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Additional information		
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT,IS,HCI,GE		
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		
Master's degree (1 major) Computer Science (2016) Master's degree (1 major) Mathematics (2016) Master's degree (1 major) Computational Mathematics (2016) Master's degree (1 major) Digital Humanities (2016) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Master's degree (1 major) Computer Science (2017) Master's degree (1 major) Computer Science (2018) Master's degree (1 major) Computational Mathematics (2019)		
Master's with 1 major Digital Humanities (2016)	JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record Master (120 ECTS) Digital Humanities - 2016	page 24 / 31



Master's degree (1 major) Mathematics (2019)  
Master's degree (1 major) Information Systems (2019)  
Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)  
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)

Module title		Abbreviation
Databases		10-I=DB-161-m01
Module coordinator		Module offered by
Dean of Studies Informatik (Computer Science)		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	graduate	--
Contents		
Relational algebra and complex SQL statements; database planning and normal forms, XML data modelling; transaction management.		
Intended learning outcomes		
The students possess knowledge about data modelling and queries in SQL, transactions as well as about easy data modelling in XML.		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
<p>written examination (approx. 60 to 120 minutes).</p> <p>If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).</p> <p>Separate written examination for Master's students.</p> <p>Language of assessment: German and/or English</p> <p>creditable for bonus</p>		
Allocation of places		
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Additional information		
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE, IS, HCI, GE.		
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		
<p>Master's degree (1 major) Computer Science (2016)</p> <p>Master's degree (1 major) Physics (2016)</p> <p>Master's degree (1 major) Digital Humanities (2016)</p> <p>Master's degree (1 major) Computer Science (2017)</p> <p>Master's degree (1 major) Computer Science (2018)</p> <p>Master's degree (1 major) Physics (2020)</p> <p>Master's degree (1 major) Physics International (2020)</p> <p>Master's degree (1 major) Quantum Engineering (2020)</p> <p>Master's degree (1 major) Quantum Engineering (2024)</p>		
Master's with 1 major Digital Humanities (2016)	JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record Master (120 ECTS) Digital Humanities - 2016	page 26 / 31

Master's degree (1 major) Physics International (2024)

Module title			Abbreviation
Seminar 1 - Current Topics in Computer Science			10-I=SEM3-161-mo1
Module coordinator		Module offered by	
Dean of Studies Informatik (Computer Science)		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	graduate	--	
Contents			
Independent review of a current topic in computer science based on literature and, where applicable, software with written and oral presentation.			
Intended learning outcomes			
The students are able to independently review a current topic in computer science, to summarise the main aspects in written form and to orally present these in an appropriate way.			
Courses (type, number of weekly contact hours, language — if other than German)			
S (2)			
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)			
term paper (10 to 15 pages) and presentation (30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English			
Allocation of places			
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Additional information			
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, SE, IT, IS, ES, LR, HCI', GE.			
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			
Master's degree (1 major) Computer Science (2016) Master's degree (1 major) Mathematics (2016) Master's degree (1 major) Computational Mathematics (2016) Master's degree (1 major) Digital Humanities (2016) Master's degree (1 major) Computer Science (2017) Master's degree (1 major) Computer Science (2018) Master's degree (1 major) Computational Mathematics (2019) Master's degree (1 major) Mathematics (2019) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)			

Module title		Abbreviation
Usability and Software Ergonomics		o6-MCS-Usab-152-mo1
Module coordinator		Module offered by
holder of the Chair of Psychological Ergonomics		Institute of Human Computer Media
ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
<b>Contents</b>		
This module is about teaching and applying analytical and empirical evaluation methods for usability and user experience of interactive products. The methods are introduced in the lecture part of the course. Selected methods are tested by the students on examples in the exercise part of the course. Furthermore, the students evaluate two interactive products independently in small groups. The task consists of planning, conducting, evaluating and presenting the results of a usability study and includes a critical comparison of methods.		
<b>Intended learning outcomes</b>		
After participating in the module courses, students will be able to apply analytical and empirical methods for evaluating interactive products, present them in writing and critically evaluate them. They will be able to plan, conduct and evaluate evaluation studies. From the analysis of the results, they develop suggestions for the revision of interactive products. Through project work in small groups, their general problem-solving ability, communicative competence, cooperation skills and self-competence to develop their own willingness to perform.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (4)		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
project report (approx. 12 pages) Language of assessment: German and/or English creditable for bonus		
<b>Allocation of places</b>		
3 places. The indicated number of places will be allocated to students of the subject Digital Humanities (Master of Arts with 120 ECTS credits). Places will be allocated primarily according to the number of subject semesters; among applicants with the same number of subject semesters, places will be allocated by lot.		
<b>Additional information</b>		
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<b>Workload</b>		
300 h		
<b>Teaching cycle</b>		
Teaching cycle: only in winter semester		
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Bachelor's degree (1 major) Human-Computer Systems (2015) Bachelor's degree (1 major) Human-Computer Systems (2016) Master's degree (1 major) Digital Humanities (2016) Bachelor's degree (1 major) Human-Computer Systems (2018)		

# Thesis

(30 ECTS credits)

Module title		Abbreviation
Master Thesis Digital Humanities		04-MA-DH-162-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)
30	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
<b>Contents</b>		
Preparation of an academically sound Master's thesis within a given time frame. In their thesis, students will work on a research question in the digital humanities in a practical and application-oriented way. Depending on the topic of the thesis, students will be required to incorporate and discuss relevant theories, interdisciplinary relations as well as current research methods and to conduct a literature search.		
<b>Intended learning outcomes</b>		
Students develop the ability to independently explore a specific problem in the digital humanities within a given time frame. They formulate the research question, investigate it and then interpret, present and discuss their findings in an appropriate and application oriented way.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
No courses assigned to module		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
Master's thesis (approx. 60 pages) Language of assessment: German and/or English		
<b>Allocation of places</b>		
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<b>Additional information</b>		
Time to complete: 6 months.		
<b>Workload</b>		
900 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Digital Humanities (2016)		