



## **Modulkatalog**

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### **Computational Linguistics and Language Technology**

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Programmformat: Minor 30

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Studienstufe: Master

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Gültig ab: Herbstsemester 2019

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[Erstellt am 10.09.2020]

### **Modulgruppen des Programms**

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Scientific Specialization

Core Modules of Computational Linguistics and Language Technology

Computer Science

Computational Linguistics and Language Technology in Practice

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Der Modulkatalog enthält alle beständigen Angaben zu den Pflicht- und Wahlpflichtmodulen des Programms, die semesterbezogenen Informationen dazu entnehmen Sie dem Vorlesungsverzeichnis.

Ebenfalls im Vorlesungsverzeichnis finden Sie das aktuelle Angebot an Wahlmodulen sowie weiterführende Informationen zu Modulen anderer Fakultäten.



**Scientific Specialization**

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06SM521-s09 [Seminar]

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**Core Modules of Computational Linguistics and Language Technology**

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## Computer Science

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**Computational Linguistics and Language Technology in Practice**

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**[Seminar]**

06SM521-s09

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|--|--------------------------------------|
| <b>Anbietende Organisationseinheit</b> | PhF: Institut für Computerlinguistik |
| <b>ECTS Credits</b>                    | 6                                    |
| <b>Angebotsmuster</b>                  | 1-semesterig, einmalig               |
| <b>Bewertung/Benotung</b>              | 1-6, in Halbschritten                |
| <b>Repetierbarkeit</b>                 | keine Wiederholungsmöglichkeit       |
| <b>Leistungsnachweis</b>               | schriftliche Arbeit und Referat      |
| <b>Unterrichtssprache</b>              |                                      |
| <b>Lehrformen</b>                      | Seminar                              |

**Lernziel**

The students: - gain further insight in a specific area of Natural Language Processing; - acquire basic methodological skills needed for scientific research; - get practice in presenting complex topics in a clear manner; - can write a scientific paper.

**Allgemeine Beschreibung**

A seminar serves the scientific deepening of knowledge in a particular subject area. Students learn the methods of scientific work, e.g. how to deal with research literature, how to interpret facts and theories as well as to properly evaluate empirical results. Moreover, they learn how to prepare and give a talk. Students learn how to discuss and evaluate other talks. Finally, they acquire the skill to elaborate their talk in a written format.

**Voraussetzungen**

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## Advanced Techniques of Machine Translation

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06SM521-501

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**Anbietende Organisationseinheit**                      PhF: Institut für Computerlinguistik

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**ECTS Credits**    6

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**Angebotsmuster**                                        1-semesterig, jedes Herbstsemester

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**Bewertung/Benotung**                                1-6, in Halbschritten

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**Repetierbarkeit**                                      einmal wiederholbar, erneut buchen

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**Leistungsnachweis**                                Portfolio (75% Schriftliche Prüfung und 25% Nachweis von im Selbststudium erbrachten Studienleistungen)

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**Unterrichtssprache**                                Englisch

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**Lehrformen**    Vorlesung mit integrierter Übung

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### Lernziel

The students: - will be acquainted with the latest research and developments in Machine Translation; - will learn how to build Machine Translation systems with state-of-the-art performance; - will learn how to perform Machine Translation experiments and publish the results.

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### Allgemeine Beschreibung

In this course we present and experience the latest research in Machine Translation. Topics include building and evaluating Machine Translation systems, and integrating the systems into various application scenarios. We take a broad perspective and look at Machine Translation for different language situations (written, spoken, and signed language). And we take a deep perspective by studying the underlying linguistic knowledge sources and statistical techniques in detail.

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### Voraussetzungen

Basic knowledge in Machine Translation.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Advanced Techniques of Text Mining

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06SM521-502

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**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

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**ECTS Credits** 6

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**Angebotsmuster** 1-semesterig, jedes 2. Frühlingsemester

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**Bewertung/Benotung** 1-6, in Halbschritten

---

**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** Portfolio (60% schriftliche Prüfung und 40% Nachweis von im Selbststudium erbrachten Studienleistungen)

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**Unterrichtssprache** Englisch

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**Lehrformen** Vorlesung mit integrierter Übung

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### Lernziel

The students: - explore the research fields which are commonly known as Information Retrieval (IR), Information Extraction (IE) and Text Mining (TM); - gain knowledge in terminology management, entity recognition, information extraction, and the various levels of Natural Language processing which are required in order to perform advanced Text Mining.

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### Allgemeine Beschreibung

Text Mining is often described as the discovery by computer of new, previously unknown information, by automatically extracting information from different written resources. In this course we aim at providing students with in-depth knowledge of information extraction techniques and specific text mining applications, with a special focus on the biomedical domain. We will investigate the importance of domain entities and terminology, the potential role of domain ontologies, as well as present a range of NLP techniques that can be applied to the problems of Text Mining.

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### Voraussetzungen

Knowledge of at least one programming language. Familiarity with the Unix environment.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Dialog Systems

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06SM521-503

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**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

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**ECTS Credits** 6

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**Angebotsmuster** 1-semesterig, jedes 2. Herbstsemester

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**Bewertung/Benotung** 1-6, in Halbschritten

---

**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** schriftliche Prüfung

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**Unterrichtssprache** Englisch

---

**Lehrformen** Vorlesung mit integrierter Übung

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### Lernziel

The students: - know the principles, architectures and components of digital personal assistants, chatbots, artificial companions and other conversational agents; - acquire theoretical knowledge about dialog and conversation.

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### Allgemeine Beschreibung

Dialog systems are becoming part of our daily lives. In this course, we focus on the theory and technology behind such conversational agents. We discuss the principles of dialog management, the overall architecture of dialog systems and how the performance of these systems can be evaluated.

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### Voraussetzungen

Programming skills and a solid understanding of machine learning algorithms.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Discourse Analysis

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06SM521-504

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**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

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**ECTS Credits** 6

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**Angebotsmuster** 1-semesterig, jedes 2. Herbstsemester

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**Bewertung/Benotung** 1-6, in Halbschritten

---

**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** schriftliche Arbeit

---

**Unterrichtssprache** Englisch

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**Lehrformen** Vorlesung mit integrierter Übung

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### Lernziel

The students: - understand the particular problems related to discourse; - know about the theories, techniques and methods meant to solve these problems.

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### Allgemeine Beschreibung

Discourse analysis focusses on text structure. Quite a number of approaches like coreference resolution, bridging, discourse parsing and argumentation mining have been developed in order to capture the central notion of coherence. In this course, discourse theories and their ingredients like dialogue acts and coherence relations are introduced. We also have a look at applications and systems.

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### Voraussetzungen

Programming skills and a solid understanding of machine learning algorithms.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Machine Learning for Natural Language Processing 1

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06SM521-505

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**Anbietende Organisationseinheit**                      PhF: Institut für Computerlinguistik

---

**ECTS Credits**    6

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**Angebotsmuster**                                        1-semesterig, jedes Herbstsemester

---

**Bewertung/Benotung**                                1-6, in Halbschritten

---

**Repetierbarkeit**                                      einmal wiederholbar, erneut buchen

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**Leistungsnachweis**                                Portfolio (75% schriftliche Prüfung und 25% Nachweis von im Selbststudium erbrachten Studienleistungen)

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**Unterrichtssprache**                                Englisch

---

**Lehrformen**    Vorlesung mit integrierter Übung

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### Lernziel

The students: - know about relevant machine learning techniques in NLP; - understand advanced concepts for semisupervised learning and linguistic structure prediction; - gain practical experience in applying machine learning to NLP problems.

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### Allgemeine Beschreibung

Modern Natural Language Processing (NLP) requires a lot of expertise in machine learning techniques. This course first introduces the basic supervised and unsupervised methods used in NLP: regression, classification, sequence labeling, clustering, topic modeling, dimension reduction. The second part has a focus on linguistic structure prediction and semisupervised approaches. The participants gain theoretical and practical experience in this course.

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### Voraussetzungen

Programming skills in Python and basic knowledge in statistics and probability theory.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Machine Learning for Natural Language Processing 2

### *Machine Learning for Natural Language Processing 2*

06SM521-506

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, jedes Frühlingssemester

**Bewertung/Benotung** 1-6, in Halbschritten

**Repetierbarkeit** einmal wiederholbar, erneut buchen

**Leistungsnachweis** Nachweis von im Selbststudium erbrachten Studienleistungen

**Unterrichtssprache** Englisch

**Lehrformen** Vorlesung mit integrierter Übung

#### Lernziel

The students: - know current state-of-the-art machine learning methods for different NLP tasks; - know how to conduct current machine-learning-based empirical research in NLP.

#### Allgemeine Beschreibung

This course has a focus on current neural machine learning (ML) methods that achieve state-of-the-art performance on Natural Language Processing (NLP) tasks. The participants study and present recent research articles from the NLP literature. As a practical preparation for a modern empirical master's thesis, they learn how to plan, conduct and evaluate ML-based NLP experiments and how to describe their approach and results in a scientific paper.

#### Voraussetzungen

Successfully completed module «Machine Learning for Natural Language Processing I».

Dieses Modul ist als vorgezogenes Mastermodul geeignet.



## Fundamentals of speech sciences and signal processing

### *Fundamentals of speech sciences and signal processing*

06SM521-519

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, jedes Frühlingsemester

**Bewertung/Benotung** 1-6, in Halbschritten

**Repetierbarkeit** einmal wiederholbar, erneut buchen

**Leistungsnachweis** Portfolio: (a) 6 written assignments throughout the term (60%) (b) written exam (40%)

**Unterrichtssprache** Englisch

**Lehrformen** Vorlesung

#### Lernziel

(a) Fundamental skills in speech signal processing (b) Understanding of speech acoustics like signal types, signal transformations, acoustic systems and signal and system analysis (c) Application of the signal processing techniques in research and industrial products.

#### Allgemeine Beschreibung

In research and in numerous practical applications, the processing of speech signals (e.g. recoding, manipulating, replaying) is fundamental. In this lecture series we will acquire a fundamental understanding of signal and system theory that is necessary for understanding speech communication in humans and the processing of speech in numerous technical applications.

#### Voraussetzungen

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.



## Instrumental techniques of phonetic research

### *Instrumental techniques of phonetic research*

06SM521-520

**Anbietende Organisationseinheit**

PhF: Institut für Computerlinguistik

**ECTS Credits**

6

**Angebotsmuster**

1-semesterig, jedes Frühlingssemester

**Bewertung/Benotung**

bestanden/nicht bestanden

**Repetierbarkeit**

einmal wiederholbar, erneut buchen

**Leistungsnachweis**

Portfolio: At the beginning of the semester students create a pool of their own recordings. During the semester they run guided analyses on their material both as part of the course but also as personal homework. In addition students are required to hand in a small-scale empiric study (7-10 pages) using their recordings and/or additional recordings from other sources to be handed in at the last meeting of the semester. Both their analyses during the semester and their final report form their portfolio and thus the basis for the evaluation of their performance.

**Unterrichtssprache**

Englisch

**Lehrformen**

Übung

#### Lernziel

Students know how to make high-quality audio recordings for phonetic research purposes. They can annotate sound files, make reliable measurements in them (formants, pitch, intensity, etc.) and produce meaningful visualizations (wave forms, spectra, spectrograms, etc.) with suitable software. They also understand how to read spectrograms so as to draw informed conclusions about the temporal and spectral characteristics of speech events. Moreover, students understand the most important key notions and concepts in automatizing measurements and in making them replicable (scripting).

#### Allgemeine Beschreibung

Since speech is a transient event, phoneticians regularly resort to the aid of technical devices in order to record, describe and analyse the production, the acoustics and the perception of speech sounds. Hence, in this module we look at the technical side of phonetic research and the students acquire and develop skills and techniques necessary for the successful deployment of such devices, ranging from sound recording equipment (especially recorders and microphones) to more specialized phonetic equipment (such as the laryngograph) to software solutions geared specifically towards the need of phoneticians (such as Praat or the R-package 'vowels').

#### Voraussetzungen

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.



## Phonetic Transcription

06SM521-521

|  |  |
|--|--|
| <b>Anbietende Organisationseinheit</b> | PhF: Institut für Computerlinguistik   |
| <b>ECTS Credits</b>                    | 6  |
| <b>Angebotsmuster</b>                  | 1-semesterig, jedes Herbstsemester   |
| <b>Bewertung/Benotung</b>              | bestanden/nicht bestanden  |
| <b>Repetierbarkeit</b>                 | einmal wiederholbar, erneut buchen   |
| <b>Leistungsnachweis</b>               | Portfolio (Students upload solutions of different exercises of phonetic transcription to the platform OLAT). |
| <b>Unterrichtssprache</b>              | Englisch   |
| <b>Lehrformen</b>                      | Übung  |

### Lernziel

Students are familiar with the different alphabets used for phonetic transcription (ranging from Boehmer-Ascoli to X-SAMPA), gaining a thorough knowledge of the International Phonetic Alphabet (IPA). They are aware of the theoretical and methodological aspects involved in phonetic transcription and are able to use the necessary practical tools (e.g., fonts, computer software, etc.) in an adequate manner.

### Allgemeine Beschreibung

This tutorial offers a historical overview of phonetic transcription from the foundations in the nineteenth century (i.e. the creation of the dialectological transcription systems and the introduction of the IPA in 1886) to the novel tools used in the field of speech technology (e.g. the X-SAMPA-Alphabet). The practical exercises focus on different types of transcription (broad/narrow, phonemic/phonetic, systematic/impressionistic), on the basis of both written texts and audio recordings and illustrating better and lesser known languages. The technical tools consist in particular of phonetic fonts (including shortcuts and the "IPA-Palette") and the use of acoustic software for manual and automatic segmentation/annotation of audio recordings. An outlook on some non-phonetic procedures of annotating spoken language (e.g. in the field of conversation analysis or working with video recordings) will round off the tutorial.

### Voraussetzungen

The participation in "The Sounds of the World's Languages" is highly recommended.

Dieses Modul ist als vorgezogenes Mastermodul geeignet.



## [Summer School]

06SM521-s06

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, einmalig

**Bewertung/Benotung** bestanden/nicht bestanden

**Repetierbarkeit** keine Wiederholungsmöglichkeit

**Leistungsnachweis** Nachweis von im Selbststudium erbrachten Studienleistungen

**Unterrichtssprache**

**Lehrformen** Selbststudium

### Lernziel

Learning objectives are: - repeat and consolidate what you have learned - acquire new content / topic areas in a compact form - get to know the latest trends - exchange of experiences with students from other universities - networking at international level.

### Allgemeine Beschreibung

Summer schools are designed to give students an in-depth insight into specific subject areas. This way, they consolidate what they have learned so far during their studies, expand their knowledge of core theories and understand new approaches in a compact way. They become aware of current trends, they exchange experiences and assessments with students from other universities, and thus get the opportunity to get to know the international level and at the same time establish relationships that can be helpful beyond their studies. This module can be booked to credit the attendance at summer schools that are related to Natural Language Processing. This module can be booked with 3 or 6 ECTS points. The amount of points will be decided in consultation with the module coordinator.

### Voraussetzungen

This module can not be booked by the students themselves, the booking has to be authorized by the module coordinator. In order to credit the attendance at a summer school, it is essential to submit a request to the module coordinator before the start of the summer school.





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## Computer Graphics Lab

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BINFP601

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

---

**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

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**Lehrformen**

Sonstiges

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**Lernziel**

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**Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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**Voraussetzungen**

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## Computer Graphics

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BMINF002

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

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**Unterrichtssprache**

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**Lehrformen**

Sonstiges

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**Lernziel**

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**Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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**Voraussetzungen**

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## CSCW

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BMINF003

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

---

**Repetierbarkeit**

---

**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### Allgemeine Beschreibung

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### Voraussetzungen

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## Software Maintenance and Evolution

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BMINF005

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## Temporal and Spatial Data Management

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BMINF008

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

---

**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## Economics and Computation

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BMINF015

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

---

**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### Allgemeine Beschreibung

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### Voraussetzungen

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## Human Computer Interaction

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BMINF016

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

---

**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## Mobile Communication Systems

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BMINF017

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

---

**Repetierbarkeit**

---

**Leistungsnachweis**

---

**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### Allgemeine Beschreibung

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### Voraussetzungen

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## Vision Algorithms for Mobile Robotics

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BMINF020

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

---

**Repetierbarkeit**

---

**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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**Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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**Voraussetzungen**

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## Information Management

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MINF4200

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### Allgemeine Beschreibung

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### Voraussetzungen

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**Protocols for Mult-media Communications (PMMK)**

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MINF4209

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

---

**Repetierbarkeit**

---

**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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**Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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**Voraussetzungen**

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## **Blockchains and Overlay Networks**

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MINF4224

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## Digitalization and Sustainable Development

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MINF4519

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

---

**Repetierbarkeit**

---

**Leistungsnachweis**

---

**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### Allgemeine Beschreibung

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### Voraussetzungen

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## Practical Artificial Intelligence

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MINF4529

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

---

**Leistungsnachweis**

---

**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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### Allgemeine Beschreibung

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### Voraussetzungen

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## **Human Aspects of Software Engineering**

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MINF4532

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

---

**Lehrformen**

Sonstiges

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**Lernziel**

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**Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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**Voraussetzungen**

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## **Advanced Software Engineering**

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MINF4534

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

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**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## **Big-Data Analytics**

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MINF4538

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

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**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## **Quantitative Methods in Human-Computer Interaction**

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MINF4547

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

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**Lehrformen**

Sonstiges

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**Lernziel**

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**Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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**Voraussetzungen**

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## **Applied Analytical Data Science**

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MINF4550

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**Anbietende Organisationseinheit**

WWF: Institut für Informatik

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**ECTS Credits**

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**Angebotsmuster**

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**Bewertung/Benotung**

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**Repetierbarkeit**

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**Leistungsnachweis**

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**Unterrichtssprache**

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**Lehrformen**

Sonstiges

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**Lernziel**

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### **Allgemeine Beschreibung**

Die Informationen zu diesem Modul entnehmen Sie bitte dem Vorlesungsverzeichnis.

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### **Voraussetzungen**

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## Practical Training In-House

### *Practical Training In-House*

06SM521-510

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, jedes Semester

**Bewertung/Benotung** bestanden/nicht bestanden

**Repetierbarkeit** einmal wiederholbar, erneut buchen

**Leistungsnachweis** dokumentierte praktische Arbeit

**Unterrichtssprache** Deutsch und/oder Englisch

**Lehrformen** Praktikum

#### Lernziel

The students: - get in touch with research; - read scientific literature; - are involved in evaluation processes; - take over particular tasks in the context of a project; - are involved in the preparation of articles; - get insights into practical work; - deepen their knowledge and skills with respect to a particular topic.

#### Allgemeine Beschreibung

In this module, the students get in touch with scientific project work, that is, they learn how to do basic research. In order to accomplish these kind of skills, they read scientific literature, prepare and annotate data, apply statistical and machine learning methods to solve particular problems. They are also involved in the preparation of articles for workshops and conferences. The students work on a particular (partial) problem in a scientific context or even running project. This module can be booked to credit work done in a scientific project at the UZH. This module can be booked with 6 or 9 ECTS points. The amount of points will be decided in consultation with the module coordinator.

#### Voraussetzungen

This module cannot be booked by the students themselves, the booking has to be authorized by the module coordinator. There is no entitlement to this module, the module will only be offered if a suitable position is available in a project. The requirements will be defined according to the topic.



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## Practical Training Off-Site

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### *Practical Training Off-Site*

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06SM521-511

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**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

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**ECTS Credits** 6

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**Angebotsmuster** 1-semesterig, jedes Semester

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**Bewertung/Benotung** bestanden/nicht bestanden

---

**Repetierbarkeit** einmal wiederholbar, erneut buchen

---

**Leistungsnachweis** dokumentierte praktische Arbeit

---

**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Praktikum

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### Lernziel

The students: - get in touch with language technology companies; - learn to connect theory and practical work; - get to know the structures and processes of companies; - apply what they have learned; - broaden their knowledge of practical issues.

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### Allgemeine Beschreibung

The students gain experience in the application of computational linguistics. They get in touch with the structures and procedures of companies and are involved in the realization of software in order to solve particular problems of these companies. The students apply what they have learned and adapt it to the needs of a specific commercial sector. Practical Trainings Off-Site are usually stays at companies or public organizations that are involved with Natural Language Processing. The training has to have a relation to Natural Language Processing and they have to be organized autonomously. This module can be booked with 3 or 6 ECTS points. The amount of points will be decided in consultation with the module coordinator.

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### Voraussetzungen

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## Programming Project

### *Programming Project*

06SM521-512

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, jedes Semester

**Bewertung/Benotung** bestanden/nicht bestanden

**Repetierbarkeit** einmal wiederholbar, erneut buchen

**Leistungsnachweis** dokumentierte praktische Arbeit

**Unterrichtssprache** Deutsch und/oder Englisch

**Lehrformen** Sonstiges

#### Lernziel

The students: - autonomously design a project; - realize the project plan; - use existing tools; - do software engineering; - document their work according to standards; - evaluate the results; - use software repositories.

#### Allgemeine Beschreibung

Programming projects aim at the consolidation of programming skills and the acquisition of software engineering skills. Starting with a particular research question and relevant literature, they work on a solution, define milestones, acquire and/or annotate data, implement a program and evaluate it using appropriate data. This module can be booked to credit work done in a programming project. This module can be booked with 3, 6 or 9 ECTS points. The amount of points will be decided in consultation with the module coordinator.

#### Voraussetzungen

This module cannot be booked by the students themselves, the booking has to be authorized by the module coordinator. Before a programming project is started, it is essential to get the permission of the module coordinator (per Email). The prerequisites will be set according to the topic.



## Student Teaching Assistant

### *Student Teaching Assistent*

06SM521-513

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, jedes Semester

**Bewertung/Benotung** bestanden/nicht bestanden

**Repetierbarkeit** einmal wiederholbar, erneut buchen

**Leistungsnachweis** dokumentierte praktische Arbeit

**Unterrichtssprache** Deutsch und/oder Englisch

**Lehrformen** Sonstiges

#### Lernziel

The students: - cope with computational linguistics content from a teaching perspective; - learn to prepare computational linguistics content in a way tailored to a student's audience; - learn to correct exercises and give appropriate feedback.

#### Allgemeine Beschreibung

A student teaching assistance serves the acquisition of basic teaching skills. This requires a deeper insight of the contents of the associated lecture and the ability to prepare teaching material in order to help the students to better understand it. The task also involves the preparation and correction of exercises. This module can be booked to credit the conducting of exercises/tutorials. This module can be booked with 3 or 6 ECTS points. The amount of points will be decided in consultation with the module coordinator.

#### Voraussetzungen

This module can not be booked by the students themselves, the booking has to be authorized by the module coordinator. It is essential to get the permission of the module coordinator (per Email). The lecturers have to be included in the communication. The open positions for student teaching assistants are usually posted on the mailing list of the Institute of Computational Linguistics (cl-list@lists.ifi.uzh.ch) a few weeks before the semester starts. Students interested in conducting exercises/tutorials of a specific course can apply anytime for the position directly with the lecturer and the module coordinator. In order to be a student teaching assistant of a module, the module in question must have been passed successfully beforehand.