



## 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 22.01.2024]

### 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.



**06M-7521i01 Scientific Specialization**

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06SM521-s09 [Seminar] (W 6)

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**06M-7521i02 Core Modules of Computational Linguistics and Language Technology**

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06SM521-501	Advanced Techniques of Machine Translation (WP 6)	7
06SM521-505	Machine Learning for Natural Language Processing 1 (WP 6)	8
06SM521-506	Machine Learning for Natural Language Processing 2 (WP 6)	9
06SM521-514	Intensivwoche (WP 6)	10
06SM521-519	Fundamentals of speech sciences and signal processing (WP 6)	11
06SM521-520	Instrumental techniques of phonetic research (WP 6)	12
06SM521-521	Phonetic Transcription (WP 6)	13
06SM521-530	Eye tracking: Experiment design and machine learning methods (WP 6)	14
06SM521-532	Artificial Intelligence for Language Accessibility (WP 6)	15
06SM521-533	Advanced Machine Learning (WP 6)	16
06SM521-s06	[Summer School] (W 6)	17

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**06M-7521i03 Computer Science**

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Diese Modulgruppe enthält ausschliesslich Wahlmodule. Informieren Sie sich im Vorlesungsverzeichnis über das aktuelle Angebot.

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**06M-7521i04 Computational Linguistics and Language Technology in Practice**

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06SM521-510	Practical Training In-House (WP 6)	18
06SM521-511	Practical Training Off-Site (WP 6)	19
06SM521-512	Programming Project 1 (WP 6)	20
06SM521-513	Student Teaching Assistant 1 (WP 6)	21
06SM521-516	Student Teaching Assistant 2 (WP 6)	22
06SM521-517	Programming Project 2 (WP 6)	23

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## [Seminar]

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06SM521-s09

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**Anbietende Organisationseinheit**                      PhF: Institut für Computerlinguistik

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**ECTS Credits**    6

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**Angebotsmuster**                                        1-semesterig, einmalig

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

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**Repetierbarkeit**                                      keine Wiederholungsmöglichkeit

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**Leistungsnachweis**                                schriftliche Arbeit und Referat

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**Unterrichtssprache**

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**Lehrformen**    Seminar

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### Lernziel

The students (1) gain further insight in a specific area of Natural Language Processing (2) acquire basic methodological skills needed for scientific research (3) get practice in presenting complex topics in a clear manner (4) can write a scientific paper

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### 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.

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### 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 (1) will be acquainted with the latest research and developments in Machine Translation (2) will learn how to build Machine Translation systems with state-of-the-art performance (3) 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 and Machine Learning.

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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

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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, Tutorat

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### Lernziel

The students (1) know about relevant machine learning techniques in NLP (2) understand advanced concepts for semisupervised learning and linguistic structure prediction (3) 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

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06SM521-506

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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 Frühlingsemester

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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 (50% Referat/Diskussionsbeiträge, 50% schriftliche Arbeit)

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**Unterrichtssprache**                                Englisch

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**Lehrformen**    Vorlesung, Tutorat

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### Lernziel

Students know the current state of machine learning methods for various NLP tasks. They know how to conduct machine learning-based empirical research in computational linguistics and how to present it in the scientific format of a workshop paper.

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### Allgemeine Beschreibung

This course focuses on current neural machine learning (ML) methods that achieve state-of-the-art performance in Natural Language Processing (NLP) tasks. Participants study and present current research articles from the NLP literature. As a practical preparation for a modern empirical master 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.

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### Voraussetzungen

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

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Intensivwoche

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06SM521-514

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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 Frühlingssemester

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**Bewertung/Benotung** bestanden/nicht bestanden

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** Portfolio (50% successful participation in the workshop week and 50% proof of self-study achievements)

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**Unterrichtssprache** English and/or languages of the host country

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**Lehrformen** Exkursion

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### Lernziel

Students can actively participate in the scientific community. They learn to hold a presentation in front of an international audience and have the possibility to get insights into company affairs. The workshop week encourages international networking and strengthens the students team spirit.

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### Allgemeine Beschreibung

Workshop week with international exchange, usually in the form of excursion abroad. Depending on the possibilities, the following elements are part of the program: - Visiting universities and research centers - Exchange with students, doctoral students and lecturers - Presentation of own projects - Company visits - Participation in a conference or summer school. The workshop week usually takes place at the end of the spring semester.

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### Voraussetzungen

none

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## Fundamentals of speech sciences and signal processing

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06SM521-519

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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 Frühlingsemester

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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: (a) weekly assignments, 40% (b) end of term exam, 60%

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**Unterrichtssprache** Englisch

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**Lehrformen** Vorlesung

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### Lernziel

(1) Fundamental skills in speech signal processing (2) Understanding of speech acoustics like signal types, signal transformations, acoustic systems, signal and system theory (3) Application of the signal processing techniques in research and industrial products.

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### Allgemeine Beschreibung

Experience the captivating world of speech signal processing. Discover the essential techniques that enable us to decode, manipulate, and reproduce the human communication with speech. Learn about signal and system theory necessary for speech processing in both human interaction and cutting-edge technological applications. This lecture series will equip you with the fundamental knowledge needed to unravel the intricacies of speech communication and embrace the possibilities it holds.

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### Voraussetzungen

An interest in speech signal processing is with computers required.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Instrumental techniques of phonetic research

06SM521-520

**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

**ECTS Credits** 6

**Angebotsmuster** 1-semesterig, jedes Frühlingsemester

**Bewertung/Benotung** bestanden/nicht bestanden

**Repetierbarkeit** einmal wiederholbar, erneut buchen

**Leistungsnachweis** During the semester students run guided analyses on spoken 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) to be handed in a fortnight after 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

Students are required to have attended an introductory module in phonetics at bachelor or master level.

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.



## Eye tracking: Experiment design and machine learning methods

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06SM521-530

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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 Frühlingsemester

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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

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**Unterrichtssprache**                                Englisch

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**Lehrformen**    Übung

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### Lernziel

Students will learn how to develop an experiment design for a given research question. Students will further learn how to implement and conduct an eye tracking experiment, choose and implement adequate preprocessing algorithms and implement state-of-the-art statistical and machine learning methods for the analysis of eye tracking data.

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### Allgemeine Beschreibung

In this course, we will study eye tracking methodology for (psycho-)linguistic basic research as well as technological applications including cognitively enhanced/interpretable NLP. The course covers an introduction to eye tracking hardware, the design and implementation of experiments and the preprocessing of the data. The main focus will be the analysis and implementation of state-of-the-art machine learning methods for the analysis of eye tracking data.

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### Voraussetzungen

Python programming skills at least on the level of the Module «Programmiertechniken in der Computerlinguistik 1».

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## Artificial Intelligence for Language Accessibility

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06SM521-532

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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**                                Written exam

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**Unterrichtssprache**                                Englisch

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**Lehrformen**    Vorlesung mit integrierter Übung

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### Lernziel

Students (1) are aware of different target groups in the context of accessibility; (2) are aware of language barriers that these target groups face; (2) know about research approaches from the area of artificial intelligence towards reducing some of these barriers; (3) know how to apply a selection of these approaches.

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### Allgemeine Beschreibung

Blind and visually impaired, deaf and hearing-impaired, cognitively, motor-impaired, and persons with speech and language disorders face many barriers in their everyday lives, often related to language. This course provides an overview of common barriers and introduces artificial intelligence approaches developed to reduce some of these barriers. Specifically, the course deals with tasks such as sign language recognition, translation, and production; intralingual subtitling; audio description; diagnostics of speech and language disorders; automatic text simplification; and speech recognition and synthesis as part of Augmentative and Alternative Communication (AAC) and Ambient Assisted Living (AAL). A focus is on research approaches; transversal topics are those of multimodality and ethics. Students will gain hands-on practice applying some of the approaches as part of the exercises accompanying the course.

This course is preceded by a "Digital Accessibility" course.

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### Voraussetzungen

Knowledge to the extent of the courses "Einführung in die Computerlinguistik 1", "Programmiertechniken der Computerlinguistik 1", "Programmiertechniken der Computerlinguistik 2", and "Digital Accessibility"

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## Advanced Machine Learning

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06SM521-533

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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 Frühlingsemester

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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 (20% Theoretical and practical assignments, 80% Written exam)

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**Unterrichtssprache**                                Englisch

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**Lehrformen**    Vorlesung mit integrierter Übung, Tutorat

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### Lernziel

Students will acquire theoretical knowledge of state-of-the-art machine learning techniques and the practical skills to apply these methods to different kinds of problem settings.

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### Allgemeine Beschreibung

First, this course covers an in-depth discussion of state-of-the-art methods in supervised and unsupervised machine learning including (Retrieval) Transformers, Graphical Neural Networks and Diffusion Models as well approaches to combine elements from these architectures. We will further discuss how transfer learning (including zero- and N-shot learning) can be applied in different types of problem settings.

Second, this course provides an introduction to Reinforcement Learning that introduces the reinforcement problem setting as Markov Decision Process and covers Dynamic Programming approaches, Monte Carlo methods, Temporal Difference Learning and approximate solution methods.

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### Voraussetzungen

Solid knowledge of supervised and unsupervised machine learning, probability theory, linear algebra, multivariate calculus as well as fluent Python programming skills are required.

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Dieses Modul ist als vorgezogenes Mastermodul geeignet.

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## [Summer School]

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06SM521-s06

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**Anbietende Organisationseinheit** PhF: Institut für Computerlinguistik

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**ECTS Credits** 6

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**Angebotsmuster** 1-semesterig, einmalig

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**Bewertung/Benotung** bestanden/nicht bestanden

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**Repetierbarkeit** keine Wiederholungsmöglichkeit

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**Leistungsnachweis** Nachweis von im Selbststudium erbrachten Studienleistungen

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**Unterrichtssprache**

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**Lehrformen** Selbststudium

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### Lernziel

Learning objectives are (1) repeat and consolidate what you have learned (2) acquire new content / topic areas in a compact form (3) get to know the latest trends (4) exchange of experiences with students from other universities (5) networking at international level

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### 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.

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### 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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## Practical Training In-House

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06SM521-510

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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

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** dokumentierte praktische Arbeit

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**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Praktikum

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### Lernziel

The students (1) get in touch with research (2) read scientific literature (3) are involved in evaluation processes (4) take over particular tasks in the context of a project (5) are involved in the preparation of articles (6) get insights into practical work (7) deepen their knowledge and skills with respect to a particular topic

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### 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.

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### 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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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

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** dokumentierte praktische Arbeit

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**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Praktikum

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### Lernziel

The students (1) get in touch with language technology companies (2) learn to connect theory and practical work (3) get to know the structures and processes of companies (4) apply what they have learned (5) 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

This module cannot be booked by the students themselves, the booking has to be authorized by the module coordinator. A prior application must be approved by the module coordinator in order for the Practical Training Off-Site to be credited.

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## Programming Project 1

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06SM521-512

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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

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** dokumentierte praktische Arbeit

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**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Sonstiges

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### Lernziel

The students (1) autonomously design a project (2) realize the project plan (3) use existing tools (4) do software engineering (5) document their work according to standards (6) evaluate the results (7) use software repositories

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### 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 first 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.

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### Voraussetzungen

In the duration of a study level a maximum of two programming projects can be booked. This module can be booked to credit work done in a programming project. It 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.

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## Student Teaching Assistant 1

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06SM521-513

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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

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** dokumentierte praktische Arbeit

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**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Sonstiges

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### Lernziel

The students (1) cope with computational linguistics content from a teaching perspective (2) learn to prepare computational linguistics content in a way tailored to a student's audience (3) learn to correct exercises and give appropriate feedback

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### 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.

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### Voraussetzungen

In the duration of a study level a maximum of two modules «Student Teaching Assistant» can be booked, whereby the two modules must differ in content (also to any previously completed student teaching assistant modules). This module is booked in order to receive credit for a first job as a student teaching assistant at master's level.

This module is an application module, the application has to be authorized by 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 (clist@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. The module in question must have been passed successfully beforehand.

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## Student Teaching Assistant 2

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06SM521-516

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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

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

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**Leistungsnachweis** dokumentierte praktische Arbeit

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**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Sonstiges

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### Lernziel

The students (1) cope with computational linguistics content from a teaching perspective (2) learn to prepare computational linguistics content in a way tailored to a student's audience (3) learn to correct exercises and give appropriate feedback

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### 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.

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### Voraussetzungen

In the duration of a study level a maximum of two modules «Student Teaching Assistant» can be booked, whereby the two modules must differ in content (also to any previously completed student teaching assistant modules). This module is booked in order to receive credit for a second job as a student teaching assistant at master's level.

This module is an application module, the application has to be authorized by 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 ([cclist@lists.ifi.uzh.ch](mailto:cclist@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. The module in question must have been passed successfully beforehand.

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## Programming Project 2

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06SM521-517

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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

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**Repetierbarkeit** einmal wiederholbar, erneut buchen

---

**Leistungsnachweis** dokumentierte praktische Arbeit

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**Unterrichtssprache** Deutsch und/oder Englisch

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**Lehrformen** Sonstiges

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### Lernziel

The students (1) autonomously design a project (2) realize the project plan (3) use existing tools (4) do software engineering (5) document their work according to standards (6) evaluate the results (7) use software repositories

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### 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 with 3, 6 or 9 ECTS points. The amount of points will be decided in consultation with the module coordinator.

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### Voraussetzungen

In the duration of a study level a maximum of two programming projects can be booked. This module can be booked to credit work done in a second programming project. It 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.

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