Module title	Abbreviation
Music Information Retrieval	10-I=MIR-232-m01

Module coordinator	Module offered by
Dean of Studies Informatik (Computer Science)	Institute of Computer Science

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

Duration	Module level	Other prerequisites
1 semester	graduate	--

Contents

This lecture introduces the research field of Music Information Retrieval (MIR), focussing on the following topics: Music representations (graphical, symbolic, audio), basic music theory concepts, audio signal processing (esp. time-frequency transformations, variants of the Fourier transform), selected machine learning techniques, overview and in-depth study of individual MIR tasks (e.g., harmony analysis/chord recognition, beat tracking/tempo, structure analysis, genre/style classification), data preparation/annotation and corpus analysis for digital humanities/musicology

Intended learning outcomes

The students have a fundamental understanding of music representations and audio data as well as theoretical and practical knowledge in the field of audio signal processing and specialized machine learning techniques. They have gained experience with typical MIR tasks and are able to understand, develop, and apply MIR algorithms.

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

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

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 to 120 minutes) or
b) oral examination of one candidate each (approx. 20 minutes) or
c) oral examination in groups of up to 3 candidates (approx. 15 minutes)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every year, summer semester

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

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Module appears in

Master's degree (1 major) Computer Science (2023)
Master's degree (1 major) Artificial Intelligence (2024)
Master's degree (1 major) Computational Mathematics (2024)
Master's degree (1 major) Mathematics (2024)