

Lehrform (*teaching format*) / **SWS** (*hours per week*): 2VL + 2UE

Kreditpunkte (*credit points*): 6

Turnus (*frequency*): Usually each winter term

Inhaltliche Voraussetzungen (*content-related prior knowledge/skills*): NONE

Sprache (*language*): English

Lehrende (*teaching staff*): AG Künstliche Intelligenz (Prof. Michael Beetz, PhD)

Studiengang (<i>degree program</i>)	Module	Semester
Informatik (Master)	IMVP, IMVP-AI	ab 1. Sem.
AI and Intelligent Systems (Master)	AI-M-CER	from 2nd sem.
Informatik (Bachelaor)	(Nur <i>Freie Wahl</i>)	ab 1. Sem.

Lernergebnisse / *Learning Outcome*:

- Understand and apply concepts of functional programming
- Understand and apply artificial intelligence techniques
- Program an autonomous robot platform using ROS
- Implement failure handling techniques

Inhalte / *Contents*:

This course gives a solid practical introduction to the Lisp programming language up to advanced topics. The first half of the course covers the basics of functional programming, Artificial Intelligence techniques and modern robot programming. The second half involves programming on an autonomous robot platform similar to TurtleBot. The assignment is to be worked on independently in small groups. The task is similar for all the groups and the results of the project are assessed in a final competition.

Hinweise (*remarks*): The table lists only the primary / most specific modules to which this course is assigned.