

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

**Kreditpunkte** (*credit points*): 6

**Turnus** (*frequency*): usually, each summer term

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

**Sprache** (*language*): English

**Lehrende** (*teaching staff*): Michaela Kümpel, Robert Porzel

Studiengang ( <i>degree program</i> )	Module	Semester
Informatik (Bachelor VF)	IBVP	ab 4.Sem.
Digitale Medien (Bachelor)	DMB-MA-2	ab 4.Sem.
Informatik (Master)	<i>General Studies</i>	ab 1.Sem.

**Lernergebnisse** / *Learning Outcome*:

The students

- get to know different types of knowledge
- learn why knowledge representation is important for agent applications
- are able to represent knowledge for agent applications
- get to know different techniques to acquire knowledge from the web
- can apply knowledge acquisition to extract relevant web knowledge
- learn how to extend acquired knowledge for agent applications
- are able to query their acquired knowledge
- know how different agents can query the knowledge base
- can generate a knowledge base that can be queried and used in an agent application

**Inhalte** / *Contents*:

This course deals with the idea of bringing knowledge into applications to support users in daily life. It therefore covers topics on how knowledge can be represented to be machine-understandable, how knowledge can be acquired from different sources (including Web scraping) and how such different knowledge chunks can be linked. It will further discuss how to reason about knowledge and how different agents like websites, AR applications or robots can use knowledge to support users in their daily life. All exercises will be available in platform-independent jupyter notebooks based on python and have low software requirements.

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