1	**1.1 Title of module (GER / ENG)** Selected Topics on Artificial Intelligence	**1.2 Short description (optional)** STAI	**1.3 Module code** (from HIS-POS)
2	**2.1 Cycle of module:** ☒ **each summer semester,** ☐ **each winter semester** **other cycle, namely:**	**2.2 Duration of module** ☒ **1 semester** ☐ **2 semesters**	
3	**3.1 Module offered in the following study programme(s):**	**3.2 Compulsory (Pf), compulsory elective (WPf), elective (W)**	**3.3 Recommended semester:**
	Master Business Informatics	WPf	
	full-time		2
	part-time, start summer		3
	part-time, start winter		4

4 **Workload**

				Workload in total	
	Teaching methods	**Weekly teaching hours ("Semesterwochenstunde") per teaching method**	**Hours in semester per teaching method** 1 weekly teaching hour per semester can be indicated as 15 hours, i.e. 1 weekly teaching hour = 1 hour x 15 semester weeks	**Workload in hours** sum contact hours and self-study in hrs.	**ECTS (credit points)** generally 30 hrs. = 1 credit point; only full numbers allowed
Contact hours (e.g. lecture, seminar, practical course, practical phase/internship, group work, project work, case study, simulation game, credited tutorial (addtional lines possible)	Seminar	2	30	**150**	**5**
	Practical course	1	15		
	Sums	Sum contact hours in weekly teaching hours ("Semesterwochenstunden")	Sum contact hours in hrs.		
Self-study (e.g. tutorial, preparation, follow-up work, preparation for assignments and homeworks, research etc.)	Preparation/follow-up work		75		
	Preparation for assignments		30		
	Sums		Sum self-study in hrs		

5 **5.1 Intended learning outcomes** (What should students be able to do after having accomplished the module? Does the module provide the opportunity to acquire soft skills in addition to professional knowledge? For which other modules and prospective tasks in the labour market are the acquired knowledge and skills relevant?)

The students are able to

- characterize intelligent agents, the properties of their task environments, and possible agent architectures
- model problems as search problems and use efficient algorithms combined with domain-specific heuristics to solve them efficiently
- model problems as constraint satisfaction problems and use efficient algorithms combined with domain-independent heuristics to solve them efficiently
- explicitly represent knowledge using propositional logic and first-order logic and use efficient algorithms to infer new knowledge and prove theorems
- model problems as planning problems and use efficient algorithms combined with domain-independent heuristics to solve them efficiently

5.2 Course content

- Intelligent Agents
- Solving Problems by Searching
- Constraint Satisfaction Problems
- Logical Agents
- First-Order Logic
- Classical Planning
- Beyond Classical Planning

→ details can be found in course syllabus, recommended study plan etc.

Module Description

5 **5.3 Short information about module** (This paragraph [max. 250 characters] will be published on the website of FH Münster to support persons interested in studying at FH Münster to choose the appropriate study programme. Please focus on the main intended learning outcomes and course content, ideally also comprising information about the relevance of the module for the further course of study and the labour market. Please formulate whole sentences, address your (prospective) students directly and avoid technical terms.

You will learn techniques and algorithms from different areas of AI for developing intelligent agents. You will deal with search problems, constraint satisfaction problems, knowledge representation and inference, and planning problems.

6 **6.1 Prerequisits** (*formal:* examination of module XY has to be passed or similar *content-wise*; *module XY should have been attended, the following knowledge and skills should have been acquired: ….)*

6.2 Requirements for awarding credit points (e.g. passing final examination, successful accomplishment of assignments in the course of study, regular active participation)

Passing final examination

6.3 Type and extent of examination (e.g. written exam, oral exam, term paper, presentation, portfolio, duration of examination in minutes)

Oral exam

6.4 Requirements for admission to examination

6.5 Weighing of module grade when calculating final grade

see examination regulations for aforementioned study programmes (line 3).*

*You will find the examination regulations of all study programmes in the official announcements of the FH Münster: https://www.fh-muenster.de/hochschule/aktuelles/amtliche_bekanntmachungen/index.php?p=2,7.

7	**7.1 Languages used in the module:** ☐**German** ☒ **English** ☐ **others, namely:**
	7.2 Contact person for module: Prof. Dr. Norman Lahme-Hütig
	7.3 Professors (optional) Prof. Dr. Norman Lahme-Hütig
	7.4 Maximum number of participants (optional)
	7.5 Further information (optional) (e.g. literature recommendations, other persons involved, etc.)