inf537 - Intelligent Systems

Module name  
Intelligent Systems

Module code  
inf537

ECTS credit points  
6.0 KP

Workload  
180 h

Used in degree programmes  
- Master's Programme Business Informatics > Akzentsetzungsmodule Bereich Wirtschaftsinformatik
- Master's Programme Computing Science > Mastermodule
- Master's Programme Engineering of Socio-Technical Systems > Embedded Brain Computer Interaction
- Master's Programme Engineering of Socio-Technical Systems > Human-Computer Interaction
- Master's Programme Engineering of Socio-Technical Systems > Systems Engineering

Contact person  
module responsibility
- Die im Modul Lehrenden
- Jürgen Sauer

authorized examiners
- Jürgen Sauer
- Die im Modul Lehrenden

Prerequisites  

Skills to be acquired in this module  

Professional competence
The students:
- Name the structure of agent-based systems
- Use problem-solving methods for complex problems
- Characterise the application area of process planning
- Evaluate the suitability of processes regarding to specific problems

Methodological competence
The students:
- Assign problem-solving methods to different problems

Social competence
The students:
- Implement selected methods in small teams

Self-competence
The students:
- Develop own solutions for given problems

Module contents  
A lot of application areas use "intelligent" problem-solving methods. These are the main focus of this lecture. They will be illustrated by examples in order to enhance the students' problem-solving abilities.
These include

- A brief introduction into AI
- Agent systems and
- Solution methods of AI like heuristics, meta-heuristics, soft computing methods.

To apply and foster the contents of the lecture, an intelligent planning system is implemented in practical exercises.

**Recommended reading**

Suggested reading:

- Ghallab/ Nau/Traverso: Automated Planning, Morgan Kaufman, 2004

**Links**

- **Languages of instruction**: German, English
- **Duration (semesters)**: 1 semester
- **Module frequency**: once a year
- **Module capacity**: Unlimited
- **Module level**: AS (Accentuation)
- **Module type**: Pflicht o. Wahlpflicht / compulsory or optional
- **Lern-/Lehrform / Type of program**: V+Ü
- **Previous knowledge**: Produktionsorientierte Wirtschaftsinformatik

**Examination**

- **Examination periods**: At the end of the lecture period
- **Type of examination**: Exercises and written exam

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