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Ostbayerische Technische Hochschule
Amberg-Weiden

Information Sheet
Course of Study

Applied Computer Science

General Information
This course of study aims to enable students to work as computer scientist and lays the foundation for a consecutive master programme at a university or university of applied sciences.

The programme is offered in connection with one of the following areas of application: either **Industrial Informatics** (II) or **Media Informatics** (MI).

Graduates with a focus on Industrial Informatics have acquired a broad engineering background. As software architects, they understand the requirements of clients from different engineering disciplines and develop precise programme structures with the aid of modern software engineering.

Typical fields of operation for graduates with a focus on Media Informatics include, for example, e-commmerce and web applications, interactive computer graphics, innovative user interfaces, mobile applications, computer-based training software and IT security.

Course of Study
The programme combines six **theoretical semesters** and a practical one. In addition, students have to complete a compulsory **six-week pre-study practical placement** (subject-specific) either prior to the start of the study or during lecture-free time by the end of the second semester.

The programme offers a **comprehensive education** in the core areas of computer science:

- Mathematics, Algorithms and Data Structures
- Programming
- DV-Systems, Computer Networks
- User Interface Programming
- Operating Systems, Database Systems
- Software Engineering and Software Projects

Industrial Informatics conveys a combination of basic engineering subjects and computer science. Specific modules of this field of specialisation are

- Physics, Design
- Electrical Engineering and Measurement
- Practical Application of Systems Engineering
- Automation Engineering, Control Engineering
- Embedded Systems
- Digital Signal Processing
- Computer Vision
- Numerical Processes

Media Informatics provides knowledge and skills in media production combined with computer science. Specific courses are

- Media Design
- Design and Production of Digital Media
- Web Systems and Web Database Systems
- Human-Computer-Interaction
- Web-Client-Technologies
- Mobile and Ubiquitous Computing
- Basics of Coding Theory and Cryptology
- Web Application Development
- Content Management Systems
- APP Programming
- Information Security

Both areas of specialisation require a practical semester and a final research paper (Bachelor's Thesis).

A variety of practical projects and laboratory experience complement the taught modules. Here, students benefit from the University's well equipped state-of-the-art laboratories.

The course of study leads to a **Bachelor of Engineering degree (B. Eng.).**

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