



BSc

FHV STUDIES 

Informatics - Software and Information Engineering Bachelor's Degree

Informatics at Vorarlberg University of Applied Sciences teaches students to design and develop new communication and information systems in the context of the challenges of the Information Age. The curriculum for the undergraduate degree programme in Informatics - Software and Information Engineering is based closely on the internationally recognized Software Engineering 2004 Curriculum Guidelines, a volume of the Computing Curricula Series that was co-developed by the Computer Society of the IEEE (Institute of Electrical and Electronics Engineers) and the ACM (Association for Computing Machinery).

Degree Content

The degree in Informatics focuses on software engineering and the software development process and comprises the following areas:

- ♦ Computer science: core curriculum and applications: 35%
- ♦ Computer science: advanced studies and specialization: 31%
- ♦ Electives: 12%
- ♦ Business studies: 10%
- ♦ English and Soft Skills: 12%

Special Infrastructure for Informatics

- ♦ Database Laboratory
- ♦ Network Laboratory
- ♦ Mobile and Distributed Systems Laboratory

Software and Information Engineering

| 1. Semester | ECTS | SWS |
|-------------------------------|-----------|-----------|
| Computer Science Fundamentals | 7 | 5 |
| Structured Programming | 10 | 7 |
| Discrete Structures | 6 | 4 |
| Economic Processes | 4 | 2 |
| English 1 | 3 | 2 |
| | 30 | 20 |

| 2. Semester | ECTS | SWS |
|---|-----------|-----------|
| Operating Systems and Computer Networks | 7 | 7 |
| Algorithms and Objects I | 9 | 7 |
| Linear Structures | 6 | 4 |
| Finance and Process Management | 3 | 2 |
| Presentation Techniques | 2 | 1 |
| English 2 | 3 | 2 |
| | 30 | 23 |

| 3. Semester | ECTS | SWS |
|---------------------------|-----------|-----------|
| Data Management | 6 | 5 |
| Algorithms and Objects II | 8 | 7 |
| Stochastic Structures | 5 | 3 |
| Information Management | 5 | 3 |
| Moderation Techniques | 1 | 1 |
| Project Management | 2 | 2 |
| English 3 | 3 | 2 |
| | 30 | 23 |

| 4. Semester | ECTS | SWS |
|-------------------------------------|-----------|-----------|
| Web applications | 6 | 4 |
| Object-oriented Analysis and Design | 10 | 8 |
| User Centered Technologies | 2 | 2 |
| IT-Management | 3 | 2 |
| Professional Practical Training | 6 | |
| English 4: Scientific Writing | 3 | 2 |
| | 30 | 18 |

| 5. Semester | ECTS | SWS |
|--|-----------|-----------|
| System Architectures | 6 | 4 |
| Enterprise Application | 10 | 7 |
| Case Study System Management | 3 | 3 |
| eMarketing, eBusiness | 2 | 1 |
| Professional Practical Training and Thesis 1 | 6 | |
| English 5: Scientific Research | 3 | 2 |
| | 30 | 17 |

| 6. Semester | ECTS | SWS |
|---|-----------|-----------|
| 4 Electives (à 4 ECTS/3 SWS) Topics see back cover | 16 | 12 |
| Elective Seminar | 3 | 2 |
| Free Elective | 3 | 3 |
| Bachelor Thesis 2 | 6 | |
| English 6: Intercultural Communication | 2 | 2 |
| | 30 | 19 |

Subjects with integrated English language or instruction by native speakers

ECTS: European Credit Transfer System (full workload of a fulltime student per semester = 30 ECTS)

SWS: Teaching units per week

ENGLISH COURSES OFFERED



During the summer (spring) semester the whole 6th semester (30 ECTS) in the Informatics bachelor's degree program is taught in English. The 6th semester of this study programme Informatics offers the possibility for specialising in the fields of:

- ◆ .net Software Development
- ◆ Mobile Computing
- ◆ Agile Software Development
- ◆ Advanced Data Management
- ◆ Privacy and Security
- ◆ Open Source Software Development
- ◆ User Centered Technologies
- ◆ Computer Graphics and Vision

FH VORARLBERG

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Students will be able to choose up to four of the above mentioned fields of specialization.

Fundamental knowledge in software engineering typically proved with at least one course in the fields of algorithms, an object-oriented programming language (Java, C# or C++), databases and web applications are prerequisites for the admission into this exchange semester for international students.



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