# Technische Informatik 1

Winter

(in German: Technische Informatik 1 )

**Module-ID: FIN-INF-1103782**

| Abbreviation | Credit Points | Semester | Term | Duration | Language | Level |
|---|---|---|---|---|---|---|
| TI-1 | 5 | Winter | 3. | 1 Semester | english | Bachelor |

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|---|---|
| **Link:** | LSF |
| **Limited accessability:** | |
| **Responsibility:** | Prof. Dr. Mesut Güneş, Prof. Dr. David Hausheer |
| **Lecturer:** | Prof. Dr. Mesut Güneş |
| **Classes:** | • Vorlesung *Technische Informatik 1*<br>• Übung *Technische Informatik 1* |
| **Applicability in curriculum:** | - B.Sc. INF: Technische Informatik<br>- B.Sc. INF: Aufbaumodule (SPO 2027)<br>- B.Sc. CV: Informatik - Wahlpflicht<br>- B.Sc. CV: Computervisualistik Wahlpflicht (SPO 2027)<br>- B.Sc. INGINF: Technische Informatik<br>- B.Sc. INGINF: Ingenieurinformatik Pflicht (SPO 2027)<br>- B.Sc. WIF: Gestalten und Anwenden - Wahlpflicht<br>- B.Sc. WIF: Informatik Wahlpflicht (SPO 2027)<br>- B.Sc. INF (bilingual): Technische Informatik<br>- B.Sc. INF (bilingual): Aufbaumodule (SPO 2027) |

**Intended learning outcomes:**
Students

- understand the structure of digital computers
- understand the layer model for computer systems

- understand number systems and the challenges of computer arithmetic
- can deal with different number systems
- understand the basic hardware components of computers
- understand machine programming and can develop simple assembly programs

**Content:**

- Structure of a computer
- Computer arithmetic
- Combinatorial switching networks
- Sequential switching networks
- Instruction set and addressing
- Conveyor belt and parallel processing

**Workload:**
56h attendance + 94h independent work

| Pre-examination requirements: | Type of examination: | Teaching method / lecture hours per week (SWS): |
|---|---|---|
| | Written exam 120 Minuten | • lecture (2 SWS)<br>• exercise (2 SWS) |

| Prerequisites according to examination regulations: | Recommended prerequisites: |
|---|---|
| none | |

| Media: | Literature: |
|---|---|
| | |

**Comments:**

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