### Winter Semester - Lectures in English Language

**PLEASE NOTE:**

- The lectures are listed according to the faculty/study program that offers them. If you fulfill the prerequisites you can take any course from any faculty/study program.
- If you take courses from different programs and semesters, there might be conflicts in the timetable. The timetable, however, will only be announced shortly before the lecture period starts.
- The list is provisional and subject to change.
- The red numbers refer to our Campus Management System LSF and allow you to find detailed course descriptions, see [https://www.lsf.hs-weingarten.de](https://www.lsf.hs-weingarten.de).
- "hrs/week" = hours per week per semester, 1 hour = 45 minutes.
- With the exception of “Technology Management and Optimization”, the lectures offered in the frame of Master programs are also open for advanced Bachelor students.

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### ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY (BACHELOR PROGRAM)

#### Second semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title and Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>1396</td>
<td>Mathematics 3: Analysis 2 with Exercises (Fechter)</td>
</tr>
<tr>
<td></td>
<td>4 hrs/week 5 ECTS credits</td>
</tr>
<tr>
<td>4912</td>
<td>Electrical Engineering/Physics 2: Electrodynamics (Siggelkow)</td>
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<tr>
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<td>4 hrs/week 5 ECTS credits</td>
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**Module Metrology 1, Module: 5 ECTS credits**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>2117</td>
<td>Metrology 1 (Pfeil)</td>
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<tr>
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<td>2 hrs/week</td>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>2121</td>
<td>Metrology, Practical Training (Pfeil)</td>
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<td>2 hrs/week Total 5 ECTS credits</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title and Module</th>
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<tbody>
<tr>
<td>7079</td>
<td>Basic Practical Training Electrical Eng. 2 – Implementation and verification (Pfeil)</td>
</tr>
<tr>
<td></td>
<td>2 hrs/week 2 ECTS credits</td>
</tr>
<tr>
<td></td>
<td>Together with 5891 Basic Practical Electrical Engineering 1: Basic Circuits: Module Electrical Engineering Practical (offered in WS in German and in SS in English)</td>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>6048</td>
<td>Object-Oriented Programming (Zeller)</td>
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<td>4 hrs/week 5 ECTS credits</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>6334</td>
<td>Digital Technology, Practical Training (Brümmer)</td>
</tr>
</tbody>
</table>
2 hrs/week 2 ECTS credits
Together with 1809 Computer Technology, Practical Training: Module Digital Practical (offered in WS in German and in SS in English)

3947 **Computer Technology** (Jobke)
4 hrs/week 5 ECTS credits

**Fourth semester**

1910 **Computer-Aided Circuit Design 2: Circuit Design** – (Siggelkow)
4 hrs/week 5 ECTS credits

2168 **Communication Technology** (Fechter)
4 hrs/week 5 ECTS credits

4651 **Power Electronics** (Farkas)
4 hrs/week 5 ECTS credits

1501 **Communication technology Module 1: Internet** (Fechter)
4 hrs/week 5 ECTS credits

5298 **Automation Module 1: (Introduction to) Power Train Engineering** (Farkas)
4 hrs/week 5 ECTS credits

**Automation Module 2**, Module: 5 ECTS credits

1494 **Real Time Programming** (Pfeil)
4 hrs/week

1904 **Real Time Programming Lab** – (Weissensbühler)
4 hrs/week 5 ECTS credits

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**E-MOBILITY AND GREEN ENERGY (BACHELOR PROGRAM) - ENGLISH TAUGHT STUDY PROGRAM (AS OF SS 2018)**

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**Second Semester**

4912 **Electrical Engineering/Physics 2: Electrodynamics** (Siggelkow)
4 hrs/week 5 ECTS credits

**Module Metrology 1** - Module: 5 ECTS credits

2117 **Measurement technology 1** (Pfeil)
2 hrs/week

2121 **Measurement Practical Training** (Pfeil)
2 hrs/week Total 5 ECTS credits

1396 **Mathematics 3: Analysis 2 with Exercises** (Fechter)
4 hrs/week 5 ECTS credits
7079  Basic Practical Training Electrical Eng. 2 – Implementation and verification (Pfeil)
2 hrs/week  2 ECTS credits
Module together with 5891 Basic Practical Electrical Engineering 1: Basic Circuits: Module Electrical Engineering Practical
(offsred in WS in German and in SS in English)

Design - Module: 5 ECTS credits

xx  Digital Design, Digital Technology Practical (x)
2 hrs/week  2 ECTS credits
Module together with xx Machinery Design and xx Analog Design: Electronics Practical offered in SS in English

1421  Materials Science (Reick)
4 hrs/week  5 ECTS credits

7086  Machine Construction (Reick)
4 hrs/week  5 ECTS credits

Fourth Semester

xx  Digital Signal Processing (x)
4 hrs/week  5 ECTS credits

xx  Computer Aided Circuit Design2 – Circuit Design (x)
4 hrs/week  5 ECTS credits

xx  Power Electronics (x)
4 hrs/week  5 ECTS credits

xx  Electric Power Trains (Reick)
4 hrs/week  5 ECTS credits

7086  Machine Construction (Reick)
4 hrs/week  5 ECTS credits

7086  Machine Construction (Reick)
4 hrs/week  5 ECTS credits

PHYSICAL ENGINEERING AND INFORMATION TECHNOLOGY (BACHELOR PROGRAM) - ENGLISH TAUGHT STUDY PROGRAM (NEW AS OF SS 2019)

Second Semester

xxx  Analysis 2 – Differential Equations and Vector Analysis (x)
4 hrs/week  5 ECTS credits

xxx  Physics 2 - Electrodynamics (x)
4 hrs/week  5 ECTS credits
**Design 1** - Module: 5 ECTS credits

* xxx CAD (x)  
  2 hrs/week

* xxx Technical Mechanics (x)  
  2 hrs/week

**Electronics TE 1** - Module: 5 ECTS

* xxx Electronics TE 1 (x)  
  2 hrs/week

* xxx Practical Electrical Engineering (x)  
  2 hrs/week

**Software Development** - Module: 5 ECTS

* xxx Software Development (x)  
  2 hrs/week

* xxx Practical Software Development (x)  
  2 hrs/week

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**ELECTRICAL ENGINEERING AND EMBEDDED SYSTEMS (MASTER PROGRAM)**

**1856**  
System Analysis and Simulation with LabVIEW for Master (Georgi)  
4 hrs/week  5 ECTS credits

**1876**  
Advanced Mathematics for Engineers 1 (Ertel)  
8 hrs/week  5 ECTS credits

**1905**  
Process Interface Equipment (Ruf)  
4 hrs/week  5 ECTS credits

**3124**  
Embedded Computing (Brümmer)  
4 hrs/week  2 ECTS credits?  
Part of Module Embedded Computing

**6807**  
Processes and Automation in Photovoltaics (Fath, Niedermeier)  
4 hrs/week  5 ECTS credits

**6894**  
Advanced Mathematics for Engineers 1 – Lab (Ertel)  
4 hrs/week  5 ECTS credits

**6895**  
Circuit & Systems 1 - System-on-Chip (Pfeil)  
4 hrs/week  5 ECTS credits

**6896**  
Signal Processing 1 + Lab (Schulter)  
4 hrs/week  5 ECTS credits

**7110**  
Wireless Communication (Fechter)
4 hrs/week  5 ECTS credits

**7421** Implementation of Close Loop Digital Control Systems IDCS (Altmann)

4 hrs/week  5 ECTS credits

**3244** Circuit & Systems 2 - Software (SW) and Hardware (HW) Design (Siggelkow) –
exceptionally offered in this winter semester, normally only SS

4 hrs/week  5 ECTS credits

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**MECHATRONICS (MASTER PROGRAM)**

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**1856** System Analysis and Simulation with LabVIEW for Master (Georgi)

4 hrs/week  5 ECTS credits

**1876** Advanced Mathematics for Engineers (Ertel)

8 hrs/week  5 ECTS credits

**4995** Advanced Mathematics for Engineers, Exercises (Ertel)

2 hrs/week  2 ECTS credits

**1905** Process Interface Equipment (Ruf)

4 hrs/week  5 ECTS credits

**1895** Simulation of Mechatronic Systems (Wöllhaf)

4 hrs/week  5 ECTS credits

**2233** Electrical Drives (Paczynski)

4 hrs/week  5 ECTS credits

**2236** Engineering Design and Materials (Niedermeier)

6 hrs/week  6 ECTS credits

**3124** Embedded Computing (Brümmer)

4 hrs/week  5 ECTS credits

**4441** Power Electronics (Farkas)

4 hrs/week  5 ECTS credits

**6807** Processes and Automation in Photovoltaics (Niedermeier, Fath)

4 hrs/week  5 ECTS credits

**6895** Circuit & Systems 1 - System-on-Chip (Pfeil)

4 hrs/week  5 ECTS credits

**7455** Autonomous mobile robots for master (Ertel, Stähle)

4 hrs/week  5 ECTS credits
TECHNOLOGY MANAGEMENT AND OPTIMIZATION (MASTER PROGRAM) Lectures offered in the frame of the TM&O Master program are open for Master students only

Module Production Optimization 1

6345 Production System Optimization (Pufall)*
2 hrs/week  3 ECTS credits

6346 Modern Production Engineering Tools (Smets) *
2 hrs/week  2 ECTS credits
This module consists of 6345, 6346 and 6911 (German), in LSF it says “one exam only”. Mr. Smets will grant ECTS for each part of the module and also partially grade the exam.

Module Product Optimization 1

6343 Development Methodology (TM & O Research & Development) (Philippi-Beck)*
4 hrs/week  3 ECTS credits

6344 Technology & Innovation Management (Ermark)*
2 hrs/ week  2 ECTS credits

Business Management

6620 Management systems (Philippi-Beck)*
2 hrs/week  2 ECTS credits

6900 Management Accounting and Reporting (Schelter)*
4 hrs/week  4 ECTS credits
Part of Module 8: Management Systems, Management Accounting and Reporting

6466 Operations Research (T. Harth)*
2 hrs/week  2 ECTS credits

6920 TMO1 System analysis and Technical Specification (Gerland)*
1 hrs/week  1 ECTS credits

* in Engl. if there are students of ESC Troyes

INTERNATIONAL ACADEMY: INNOVATION MANAGEMENT AND NEW TECHNOLOGIES
(1 YEAR PROGRAM ON BACHELOR LEVEL)

1479 Intercultural Management (Hohl)
2 hrs/week  2 ECTS credits

3586 International Companies (Philippi-Beck)
2 hrs/week  4 ECTS credits (CAN but does not have to be taken in combination with 3910)
**3910  International Management** (Philippi-Beck)
2 hrs/week 2 ECTS credits (If taken in combination with 3586 only one exam of 90 min necessary)

**3585  International Marketing** (Niersbach)
2 hrs/week 3 ECTS credits (marked case study)

**4355  Simulating and Optimizing the value network** (Hagen, Giesa)
2 hrs/week 3 ECTS credits

**4356  Business Start-Up and Entrepreneurship** (Philippi-Beck)
2 hrs/week 3 ECTS credits (business plan)

**4462/1472  Business Game** (Philippi-Beck, Klett)
Block Seminar 2 ECTS credits

**4473  Practical Project: Investment Case** (Duehnfort)
2 hrs/week 3 ECTS credits

**4910  International Conduct of Negotiation and Moderation** (Hohl, Hock)
Block Seminar 2 ECTS credits

**6919  Seminar: Research project - Guiding students through a research paper** (Pufall)
2 hrs/week 3 ECTS credits

**7184  Seminar: B2B Sales Management** (Niersbach)
2 hrs/week 3 ECTS credits

**BACHELOR LEVEL - Lectures in English language in various study fields**

**6598  International Comparison of health care systems** (Kern - Health Economics)
2 hrs/week 2 ECTS

**3058  Artificial Intelligence Lab** (Ertel - Computer Science) - in English if > 3 intl. participants
4 hrs/week 3 ECTS credits

**1825  Operating Systems** (Eggendorfer - Applied Computer Science)
4 hrs/week 4 ECTS

**4305  Strategic Management** (Willax – Business Management)
2 hrs/week 3 ECTS
**MASTER LEVEL - Lectures in English language in various study fields**

**3008**  **Artificial Intelligence for Master** (Ertel - Computer Science)  
4 hrs/week  5 ECTS credits

**3058**  **Artificial Intelligence Lab** (Ertel - Computer Science) - in English if > 3 intl. participants  
4 hrs/week  3 ECTS credits

**3227**  **Advanced Computer Graphics** (Scherzer- Computer Science)  
8 hrs/week  10 ECTS credits

**1876**  **Mathematics for Engineers** (Ertel - Computer Science)  
4 hrs/week  5 ECTS credits

**4995**  **Mathematics for Engineers - Exercises** (Ertel - Computer Science)  
2 hrs/week  3 ECTS credits

**3219**  **Modern Database Technologies** (Hulin - Computer Science)  
Blended-Learning-Course with Presence Phases  5 ECTS credits

**7592**  **Hardware Security** (Eggendorfer - Computer Science)  
Blended-Learning-Course with Presence Phases  5 ECTS credits

**LANGUAGE LECTURES AND INTERCULTURAL SEMINARS (CLIC)**

**German as a foreign language = Deutsch als Fremdsprache (DaF)**

**4382**  **DaF A1**  
Attention: The course starts with a two-week intensive course in mid-September  
4 hrs/week  4 ECTS credits

**4634**  **DaF A2**,  
Attention: The course starts with a two-week intensive course in mid-September  
4 hrs/week  4 ECTS credits

**4630**  **DaF B1**,  
Attention: The course starts with a two-week intensive course in mid-September  
4 hrs/week  4 ECTS credits

**4631**  **DaF B2**,  
Attention: The course starts with a two-week intensive course in mid-September  
4 hrs/week  4 ECTS credits
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Hours/Week</th>
<th>ECTS Credits</th>
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<tbody>
<tr>
<td>4632</td>
<td>DaF C1</td>
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<tr>
<td>7629</td>
<td>DaF Deutsch für den Beruf</td>
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<td>2</td>
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<tr>
<td>7143</td>
<td>DaF Technisches Deutsch</td>
<td>2</td>
<td>2</td>
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<tr>
<td>5144</td>
<td>DaF – Presentation and Documentation</td>
<td>2</td>
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<tr>
<td>7573</td>
<td>DaF B1, Tutorial/ Support Course</td>
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<tr>
<td>7574</td>
<td>DaF B2, Tutorial/ Support Course</td>
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<tr>
<td>5144</td>
<td>DaF - Presentation and Documentation</td>
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**English**

<table>
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<th>Course Title</th>
<th>Hours/Week</th>
<th>ECTS Credits</th>
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<tbody>
<tr>
<td>6873, 3318, 6848</td>
<td>Professional English 1, B2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>7137, 7367, 7142, 7140</td>
<td>Professional English 2, B2</td>
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<tr>
<td>7380</td>
<td>Effective Business Communication Skills B2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>4408</td>
<td>General English Fluency Upper-Intermediate B2</td>
<td>2</td>
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<tr>
<td>7489</td>
<td>Technical English Inch by inch, B2</td>
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<tr>
<td>3995</td>
<td>General English Fluency Advanced C1</td>
<td>2</td>
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<tr>
<td>7489</td>
<td>Technical English Inch by inch, C1</td>
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<tr>
<td>7377</td>
<td>English for Specific Purposes: Focus on Mechanical and Automotive Engineering</td>
<td>2</td>
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<tr>
<td>7569</td>
<td>English for Specific Purposes: Leading with Emotional Intelligence</td>
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</table>
55   **English for Specific Purposes: Project Management (Conner)**  
Blockseminar  2 ECTS credits

6857  **English for Health Economics**  
2 hrs/week  2 ECTS credits

898   **English Negotiating** (Rudolph)  
Blockseminar  3 ECTS credits

7356  **Professional and academic Writing**  
2 hrs/week  2 ECTS credits

**Seminars on Intercultural Sensitization and other topics**

4656  **Intercultural Sensitization** (Steinlein)  
Blockseminar  1 ECTS credit

1479  **Intercultural Management** (Hohl)  
2 hrs/week  2 ECTS credits

7143  **Intercultural Competence** (Rudolph)  
2 hrs/week  2 ECTS credits

7632  **Doing business and work in an English-speaking world - Reducing intercultural misunderstandings and overcoming culture shock** (Ironside)  
Blockseminar  2 ECTS credits

7634  **International Politics and business** (Mulder)  
Blockseminar:  1 full Saturday + Blended learning/ Online  
2 ECTS credits

7635  **Sun Tzu's Art of War and Business** (Mulder)  
Blockseminar  2 ECTS credits

**Other language course offers at various levels**  
Spanish, Italian, Arabic, Russian…