

## Summer 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 time table. The time table, 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>.
- "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) – ENGLISH TAUGHT STUDY PROGRAM

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### First Semester

**4233 Electrical Engineering 1: Basics – Analysis of Electric Networks** (Jobke)

4 hrs/week 5 ECTS credits

**6804 Tutorial analysis of electrical network** (Jobke) - only offered in case students are interested

2hrs/week No ECTS credits

**288 Mathematics 1: Analysis 1 with Exercises** (Elser)

4 hrs/week 5 ECTS credits

**5248 Mathematics Tutorial** (Berens)

0? hrs/week 0 ECTS credits

**3000 Mathematics 2: Linear Algebra with Exercises** (Elser)

4 hrs/week 5 ECTS credits

**4341 Programming 1** (Zeller, Drotleff)

4 hrs/week 5 ECTS credits

### Electrical Engineering Practical

**5891 Basic Lab Electrical Engineering 1: Basic Circuit** (Jobke)

2 hrs/week 3 ECTS credits

*Module together with: Basic Practical Course Electrical Engineering 2: Implementation & Verification (2<sup>nd</sup> semester) but possible to take as individual course*

**1850 Digital Technology** (Bonenberger)

4 hrs/week 5 ECTS credits

**1402 Physics Mechanics/ Physics 1** (Doderer)

4 hrs/week 5 ECTS credits

**5951 Physics 1 Exercises** (Doderer)

2 hrs/week NO credits

**Third Semester**

**4240 Electrical Engineering 3: Circuit analysis in the time and frequency domains** (Pfeil)

4 hrs/week 5 ECTS credits

**Metrology 2: Advanced:** 5 ECTS credits

**5139 Metrology 2** (Pfeil)

2 hrs/week 2 ECTS credits

**1816 Electronics, Practical Training: Linear Metrology** (Reusch)

4 hrs/week ? ECTS credits

**Robotics Module:** 5 ECTS credits

**5761 Robotics** (Wöllhaf)

2 hrs/week

**5768 Robotics Lab** (Wöllhaf/ Glönkler/ Stehle)

2 hrs/week

**Part of Digital Practical Module**

**1809 Computer Technology / Practical Training** (Jobke)

2 hrs/week 2 ECTS

*Module together with: 1438 Digital Technology Practical Training (2<sup>nd</sup> Sem) - 3 ECTS but possible to take as individual course*

**1815 Electronics** (Ludescher)

4 hrs/week 5 ECTS credits

**Computer-Aided Circuit Design 1 Module:** 5 ECTS

**7077 Basis Practical Training Engineering 3: Programming of uC** (Ludescher)

2 hrs/week 2 ECTS credits

**1911 Circuit Design Practical Training** (Ludescher)

2 hrs/week 2 ECTS credits

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**E-MOBILITY AND GREEN ENERGY (BACHELOR PROGRAM) - ENGLISH TAUGHT STUDY PROGRAM**

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**First Semester**

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4 hrs/week 5 ECTS credits

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0? hrs/week No ECTS credits

**3000 Mathematics 2: Linear Algebra with exercises** (Elser)

4 hrs/week 5 ECTS credits

**4341 Programming 1** (Drotleff)

4 hrs/week 5 ECTS credits

**Electrical Engineering Practical**

**5891 Basic lab Electrical Engineering 1: Basic Circuits** (Jobke)

2 hrs/week 2 ECTS credits

*Module together with: Basic Practical Course Electr. Eng. 2: Implementation & Verification (2<sup>nd</sup> semester) but possible to take as individual course*

**1850 Digital Technology** (Bonenberger (normally Siggelkow))

4 hrs/week 5 ECTS credits

**7805 Physics Mechanics/ Physics 1** (Klemt/ Sieber)

4 hrs/week 5 ECTS credits

**5951 Physics 1 Exercises** (Doderer)

2 hrs/week NO credits

**Third Semester**

**4240 Electrical Engineering 3: Circuit analysis in the time and frequency domains** (Pfeil)

4 hrs/week 5 ECTS credits

**Robotics Module:** 5 ECTS credits

**5761 Robotics** (Wöllhaf)

2 hrs/week

**5768 Robotics Lab** (Wöllhaf/ Glönkler/ Stehle)

2 hrs/week

**Design Module:** 5 ECTS

**7295 Machinery Design: CAD (Solid Works)** (Reick)

2 hrs/week ? ECTS credits

**1816 Electronics, Practical Training: Linear Metrology** (Reusch)

4 hrs/week ? ECTS credits

**1815 Electronics** (Ludescher)

4 hrs/week 5 ECTS credits

**7087 Automotive Engineering** (Reick)

4 hrs/week 5 ECTS credits

**Computer-Aided Circuit Design 1 Module:** 5 ECTS

**7077 Basis Practical Training Engineering 3: Programming of uC** (Ludescher)

4 hrs/week 2 ECTS credits

**1911 Circuit Design Practical Training** (Ludescher)

4 hrs/week 3 ECTS credits

### **First Semester**

**288 Mathematics 1: Analysis 1 with exercises** (Elser)

4 hrs/week 5 ECTS credits

**5248 Mathematics Tutorial** (Berens)

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4 hrs/week 5 ECTS credits

**4341 Programming 1** (Drotleff)

4 hrs/week 5 ECTS credits

**7805 Physics Mechanics/ Physics 1** (Klemt)

4 hrs/week 5 ECTS credits

**7786 Chemistry** (Kolacyk)

4 hrs/week 5 ECTS credits

**6886 Electrical Engineering** (Vogel)

4 hrs/week 5 ECTS credits

**Computer Science, Module:** 5 ECTS

**198 Basic Principles of Computer Science** (Eberhardt)

4 hrs/week 2,5 ECTS credits

**1420 Practical Computer Science** (Eberhardt)

4 hrs/week 2,5 ECTS credits

### **Third Semester**

**2111 Series Expansions and Transformations** (Vogel)

4 hrs/ week 5 ECTS credits

**6050 Physics III/ Teil Physics IV - Optics and Waves and Quantum Physics** (Klemt, Sieber)

6 hrs/ week 5 ECTS credits

**7409 Materials Science/ Materials** (Kolacyk)

4 hrs/ week 5 ECTS credits

**2119 Design II: Machine Design/ Machine Construction** (Pfeffer)

4 hrs/ week 5 ECTS credits

**1271 Applied Physics - practical training in experimental physics 1** (Klemt, Sieber)

2 hrs/ week ? ECTS credits – Teil eines Moduls

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**6051 Electronics TE2** (Vogel)  
4hrs/ week 5 ECTS credits

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**ELECTRICAL ENGINEERING AND EMBEDDED SYSTEMS (MASTER PROGRAM) - ENGLISH TAUGHT STUDY PROGRAM**

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**Advanced Control Systems/ Digital Control, Module:** 5 ECTS

**1706 Digital Control** (Berger)

2 hrs/week

**4876 Digital Control Lab** (Berger)

2 hrs/week

**1856 System Analysis and Simulation with LabView for Master** (Georgi/ Hohl)

4 hrs/week 5 ECTS credits

**2354 Engineering Mechanics** (Stetter, Winkler)

6 hrs/week 6 ECTS credits

**3244 Circuit and Systems 2 - SW- and HW- Design** (Siggelkow)

4 hrs/week 5 ECTS credits

**3311 Robotics** (Wöllhaf, Köberle)

4 hrs/week 5 ECTS credits

**4872 Computer Architecture** (Siggelkow)

4 hrs/week 5 ECTS credits

**Embedded Computing, Module:** 5 ECTS

**3124 Embedded Computing** (Brümmer)

3 hrs/week 2 ECTS credits

**4874 Embedded Computing Lab** (Brümmer)

2 hrs/week 2 ECTS credits

**5812 Robot Learning** (Schneider)

4 hrs/week 5 ECTS credits

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

4hrs/ week 5 ECTS

**7110 Wireless Communication** (Fechter)

4hrs/ week 5 ECTS

**7183 Signal Processing 2 and Lab** (Schulter)

4hrs/ week 5 ECTS

**7421 Implementation of Closed Loop Digital Control Systems (DDC)** (Altmann)

4 hrs/week 5 ECTS credits

**7455 Advanced software development for Autonomous Mobile Robots** (Ertel, Stähle)

4 hrs/week 5 ECTS credits

**7553 Robocup Software architecture project** (Ertel, Stähle)

4 hrs/week 5 ECTS credits

**7781 Computer Vision** (Elser)

4 hrs/week 5 ECTS credits

**7790 Nearfield Communication** (Pfeil)

4 hrs/week 5 ECTS credits

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## MECHATRONICS (MASTER PROGRAM) – ENGLISH TAUGHT STUDY PROGRAM

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**1397 Integration of Mechatronic Systems** (Paczynski)

4 hrs/week 5 ECTS credits

**1856 System Analysis and Simulation with LabView for Master** (Georgi, Hohl)

4 hrs/week 5 ECTS credits

**Process Interface, Module: 8 ECTS**

**1905 Process Interface Equipment** (Ruf)

4 hrs/week 3 ECTS credits

**2171 Lab on Process Interface Equipment** (Ruf)

2 hrs/week 3 ECTS credits

**2172 Lab on Robotics** (Wöllhaf)

2 hrs/week 3 ECTS credits

**3311 Robotics** (Wöllhaf)

4 hrs/week 5 ECTS credits

**Embedded Computing, Module: 10 ECTS**

**3124 Embedded Computing** (Brümmer)

3 hrs/week 2 ECTS credits

**4874 Embedded Computing Lab** (Brümmer)

2 hrs/week 2 ECTS credits

**7782 Embedded Project** (Elser)

3 hrs/week 2 ECTS credits

**Advanced Control Systems/ Digital Control, Module: 5 ECTS**

**1706 Digital Control** (Berger)

2 hrs/week

**4876 Digital Control Lab** (Berger)

2 hrs/week

**5812 Robot Learning** (Schneider)

4 hrs/week 5 ECTS credits

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

4 hrs/ week 5 ECTS

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

4 hrs/week 5 ECTS credits

**7455 Advanced software development for Autonomous Mobile Robots** (Ertel, Stähle)

4 hrs/week 5 ECTS credits

**7553 Robocup Software architecture project** (Ertel, Stähle)

4 hrs/week 5 ECTS credits

**7781 Computer Vision** (Elser)

4 hrs/week 5 ECTS credits

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**TECHNOLOGY MANAGEMENT AND OPTIMIZATION (MASTER PROGRAM)** *Lectures offered in the frame of the TM&O Master program are open for Master students only, \*courses are held in Engl. only if there are students of ESC Troyes,*

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**1397 Integration of Mechatronic systems** (Paczynski)\*

3 hrs/week 3 ECTS credits

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

4 hrs/week 5 ECTS credits

Sales and Business Development

**6461 Customer Relation Management and Optimized Distribution** (Jäckle)

2 hrs/week 2 ECTS credits

**Production Optimization 2**

**6462 Product Optimization using Design of Experiments** (Pufall)\*

2 hrs/week 3 ECTS credits

**6463 Production Technology and Simulation of production/ CAD and CAD Tools** (Philippi-Beck)\*

2 hrs/week 3 ECTS credits

**Process- and Cost Optimization**

**6459 Production Management and Optimization** (Schmidhöfer, Klett)\*

2 hrs/week 4 ECTS credits

**6465 Value-Added Process Design** (Smets)

2 hrs/week 2 ECTS credits

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**INTERNATIONAL ACADEMY: INNOVATION MANAGEMENT AND NEW TECHNOLOGIES – ENGLISH TAUGHT PROGRAM (1 YEAR) ON BACHELOR LEVEL (TAKING SINGLE/ INDIVIDUAL COURSES IS POSSIBLE)**

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**1251 International Accounting/ International Financial Reporting (IFRS)**(Dühnfort)

2 hrs/week 3 ECTS credits

**3966 Energy Engineering and New Energy Production** (Vogel)

2 hrs/week 3 ECTS credits

**3967** Quality Management (Köksal)

2 hrs/week 2 ECTS credits

**3968** Change Management (Hohl)

2 hrs/week 3 ECTS credits

**3971** Creative Problem Solving (Rudolph)

2 hrs/week 3 ECTS credits

**4156** Innovation Management (Ermark)

2 hrs/week 3 ECTS credits

**4474** New Technologies and Trends (Jenke)

2 hrs/week 3 ECTS credits

**4475** Systems Engineering (Pufall)

2hrs/week 3 ECTS credits

**1473** Systems Engineering (Practical Training)(Pufall)

2hrs/week 2 ECTS credits

**7184** Seminar: B2B Sales Management (Fuss, normally Niersbach)

2 hrs/week 3 ECTS credits

**4305** Strategic Management (Willax)

2 hrs/week 3 ECTS credits

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

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**1825** Operating Systems (Eggendorfer)(Applied Computer Science – AI)

4hrs/week 5 ECTS credits

**6598** International Comparison of Health Care Systems (Kern)(Health Economics G0)

2 hrs/week 2 ECTS credits

**7090** Autonomous Mobile Robots (Ertel, Stähle)(AI)

4 hrs/week 5 ECTS credits

**7214** Motion Design (Lauterbach)(MD) – optional in English

8 hrs/week 10 ECTS credits

**8965** Computer Aided Design CAD (Baumgart)(Technology Management – TM)

2 hrs/week 2 ECTS credits

**4911** Topics in Corporate Finance (Neff)(Technology Management – TM, Business Management – BM))

2 hrs/week 3 ECTS credits

**4305** Strategic Management (Willax)(Technology Management – TM, Business Management – BM))

2 hrs/week 3 ECTS credits



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## MASTER LEVEL - Lectures in English language in various study fields

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**3311** Robotics (Stähle) (Computer Science - IN)  
4 hrs/week 5 ECTS credits

**5812** Robot Learning (Ertel) (Computer Science - IN)  
4 hrs/week 5 ECTS credits

**6279** Computer Graphics for Master\* (Scherzer) (Computer Science - IN)  
4 hrs/week 5 ECTS credits

**6768** Game development for Master\* (Scherzer) (Computer Science - IN)  
4 hrs/week 5 ECTS credits

**7532** Shader Programming\* (Scherzer) (Computer Science - IN)  
4 hrs/ week 5 ECTS credits

**7183** Signal Processing 2 and Lab (Schulter) (Computer Science - IN)  
4 hrs/ week 5 ECTS credits

**7781** Computer Vision (Elser) (Computer Science - IN)  
4 hrs/ week 5 ECTS credits

**7592** Hardware Security (Eggendorfer) (Computer Science - IN)  
4 hrs/ week 5 ECTS credits  
Blended-Learning-Course with Presence Phases

**3939** Computational Methods in Engineering (Harth) (Product Dev. in Mech. Engineering - PEM)  
2 hrs/week 3 ECTS credits

**7671** Advanced Controlling (Neff) (Business Administration and Entrepreneurship - BWU)  
2 hrs/week 3 ECTS credits

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## LANGUAGE LECTURES AND INTERCULTURAL SEMINARS (CLIC)

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

**4382** DAF - Deutsch als Fremdsprache A1+  
4 hrs/week 4 ECTS credits

Attention: The course starts with an intensive program from March 9 - 13, 2020

**4634** DAF - Deutsch als Fremdsprache A2  
4 hrs/week 4 ECTS credits

Attention: The course starts with an intensive program from March 9 - 13, 2020

**4630** DAF - Deutsch als Fremdsprache B1+

Attention: The course starts with an intensive program from March 9 – 13, 2020

4 hrs/week 4 ECTS credits

### **4631 DAF - Deutsch als Fremdsprache B2**

Attention: The course starts with an intensive program from March 9 – 13, 2020

4 hrs/week 4 ECTS credits

### **4632 DAF - Deutsch als Fremdsprache C1.1**

3 hrs/week 2 ECTS credits

Attention: NO intensive course! Starts on March 18 with regular weekly courses; you need to do the test, and if you have are indeed C1 you could still participate in the B2 Intensive Course as a refresher and then start your C1 course on March 18

### **6308 DAF - Tutorial Course A1**

1hr/ week no credits - directly before regular German course?

### **6309 DAF - Tutorial Course A2**

1hr/ week no credits - directly before regular German course?

### **5144 DaF - Presentation and Documentation / Präsentation und Dokumentation**

2 hrs/week 2 ECTS credits

## English

Several Professional English 1, B2 courses by study program e.g.

**6873, 3318, 6873, 6848 - please check online for courses available (LSF)**

2 hrs/week 2 ECTS credits

Several Professional English 2, B2 courses by study program e.g.

**7137, 7142, 7367 - please check online for courses available (LSF)**

2 hrs/week 2 ECTS credits

### **4408 Improve your speaking skills B2 (Hopkins)**

2 hrs/week 2 ECTS credits

### **3329 Technical English - Motor Transportation (Reid)**

2 hrs/week 2 ECTS credits

### **7683 English for Health Economics (Conner)**

2 hrs/week 2 ECTS credits

### **7377 English for Specific Purposes: Focus on Mech. and Automotive Engineering (Matter)**

2 hrs/week 2 ECTS credits

### **7396 English for Specific Purposes: English for Psychology (Marquard)**

2 hrs/week 2 ECTS credits

## Seminars on intercultural and other topics

### **4656 Intercultural Sensitization (Ronssin and students)**

Block seminar 1 ECTS credit

Dates: 24.04: 16:00-19:15h; 25.04. 09:00-17:15h, D002

**1479 Intercultural Management (Hohl)**

2 hrs/week 2 ECTS credits

**7806 Intercultural Competence for Professional English (Mallon-Gerland; daSilva)**

Block seminar 2 ECTS credits

Please check LSF for exact dates!

**5149 Working in International Scientific Project Teams (Rudolph)**

Block Seminar 1 ECTS credit

Dates: 8-9.05.2020, 9-17:00, D002

**3971 Creative Problem Solving (Rudolph)**

Block seminar 3 ECTS credits

Dates: 23.03.-11.05., Mondays 9:45 – 13:00

**8034 Cross-Cultural Communication and Cooperation (Rudolph)**

Block seminar: 18.03., 04.04., 18.04. 09:00 – 16:00 2 ECTS credits

**Other language courses at various levels are offered**

Please check LSF for further details: Arabic, French, Italian, Spanish, Portuguese, Russian, (2-3 hours/week, 2-3 ECTS credits)