HOCHSCHULE RAVENSBURG-WEINGARTEN UNIVERSITY OF APPLIED SCIENCES

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.

ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY (BACHELOR PROGRAM) – ENGLISH TAUGHT STUDY PROGRAM

First Semester

4233 Electrical Engineering 1: Basics – Analysis of Electric Networks (Jobke)
4 hrs/week 5 ECTS credits

288 Mathematics 1: Analysis 1 with Exercises (Elser)
4 hrs/week 5 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 (2nd semester) but possible to take as individual course

6804 Tutorial analysis of electrical network (Jobke)
2hrs/week No ECTS credits

1402 Physics Mechanics/ Physics 1 (Doderer)
4 hrs/week 5 ECTS credits

5951 Physics 1 Exercises (Baumgarten)

2 hrs/week NO credits

1850 Digital Technology (Bonenberger (normally Prof. Siggelkow))
4 hrs/week 5 ECTS 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 Module: 5 ECTS credits
5139 Metrology 2 (Pfeil)
2 hrs/week 2 ECTS credits
1816 Electronics, Practical Training: Linear Metrology/ Analog Design (Reusch)
2 hrs/week 2 ECTS credits
Module together with: xxxx Digital Design

1809 Computer Technology / Practical Training (Jobke)
2 hrs/week 2 ECTS
Module together with: 1438 Digital Technology Practical Training (2nd semester) – 3 ECTS but possible to take as individual course

1815 Electronics (Ruf)
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

Robotics Module: 5 ECTS credits
5761 Robotics (Köberle/ Wöllhaf)
4 hrs/week
5768 Robotics Lab (Glönkler/ Lanzinger)
4 hrs/week

Fourth Semester

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

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

First Semester

288 Mathematics 1: Analysis 1 with exercises (Elser)
4 hrs/week 5 ECTS credits

7805 Physics Mechanics/ Physics 1 (Klemt)

4 hrs/week 5 ECTS credits

4341 Programming 1 (Drotleff)
4 hrs/week 5 ECTS credits

1850 Digital Technology (Bonenberger (normally Prof. Siggelkow))
4 hrs/week 5 ECTS credits

3000 Mathematics 2: Linear Algebra with exercises (Elser)
4 hrs/week 5 ECTS credits

4233 Electrical Engineering 1: Basics – Analysis of Electric Networks (Jobke)
4 hrs/week 5 ECTS credits

6804 Tutorial analysis of electrical network (Jobke)
2 hrs/week NO ECTS credits

Electrical Engineering Practical
5891 Basic lab Electrical Engineering 1: Basic Circuits (Jobke)
2 hrs/week 3 ECTS credits
Module together with: Basic Practical Course Electr. Eng. 2: Implementation & Verification (2nd semester) but possible to take as individual course

Third Semester

4240 Electrical Engineering 3: Circuit analysis in the time and frequency domains (Pfeil)
4 hrs/week 5 ECTS credits

Metrology 2: Advanced Module: 5 ECTS credits
5139 Metrology 2 (Pfeil)
2 hrs/week 2 ECTS credits
1816 Electronics, Practical Training: Linear Metrology (Reusch)

1815 Electronics (Ruf)
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

7295 CAD Design (Solid Works) (Reick)
2 hrs/week 3 ECTS credits
Part of Design Module (Sem 2 and 3) 6 SWS in total, consisting of
- 6334, Digital Technology, Practical Training (2SWS, EM2)
- xxxxxx

7087 Automotive Engineering (Reick)
4 hrs/week 5 ECTS credits

Robotics, Module: 5 ECTS credits
5761 Robotics (Köberle/ Wöllhaf)

4 hrs/week
5768 **Robotics Lab** (Glönkler/ Lanzinger)
4 hrs/week

Fourth Semester

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

PHYSICAL ENGINEERING AND INFORMATION TECHNOLOGY (BACHELOR PROGRAM) – ENGLISH TAUGHT STUDY PROGRAM
(NEW AS OF SS2019)

First Semester

288 **Mathematics 1: Analysis 1 with exercises** (Elser)
4 hrs/week 5 ECTS credits

3000 **Mathematics 2: Linear Algebra with exercises** (Elser)
4 hrs/week 5 ECTS credits

7805 **Physics Mechanics/ Physics 1** (Klemt)
4 hrs/week 5 ECTS credits

4233 **Electrical Engineering 1: Basics – Analysis of Electric Networks** (Jobke)
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 **Computer Science Excercises** (Eberhardt)
4 hrs/week 2,5 ECTS credits

7786 **Chemistry** (Kolacyak)
4 hrs/week 5 ECTS credits

3000 **Mathematics 2: Linear Algebra with exercises** (Elser)
4 hrs/week 5 ECTS credits

7805 **Physics Mechanics/ Physics 1** (Klemt)
4 hrs/week 5 ECTS credits

Third Semester

Tba

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

3008 Artificial Intelligence for Master (Ertel)
4 hrs/week 5 ECTS credits

3059 Lab on Artificial Intelligence for Master (Ertel - *not obligatory for the lecture but highly recommended)*
2 hrs/week 2 ECTS credits

3244 Circuit and Systems 2 - SW- and HW- Design (Siggelkow)
4 hrs/week 5 ECTS credits

3311 Robotics (Wöllhaf)
4 hrs/week 5 ECTS credits

Embedded Computing, Module: 5 ECTS
4874 Embedded Computing Lab (Brümmer)
2 hrs/week 2 ECTS credits
7193 Embedded Project (Brümmer)
3 hrs/week 2 ECTS credits

5812 Robot Learning (Ertel)
4 hrs/week 5 ECTS credits

6807 Processes and Automation in Photovoltaics (Fath)
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

MECHATRONICS (MASTER PROGRAM) – ENGLISH TAUGHT STUDY PROGRAM

1397 **Integration of Mechatronic Systems** (Paczynski)
4 hrs/week 5 ECTS credits

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

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

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

3059 **Lab on Artificial Intelligence for Master** *(Ertel - not obligatory for the lecture but highly recommended)*
2 hrs/week 2 ECTS credits

3311 **Robotics** (Wöllhaf)
4 hrs/week 5 ECTS credits

Embedded Computing, Module: 5 ECTS
4874 **Embedded Computing** Lab (Brümmer)
2 hrs/week 2 ECTS credits
7882 **Embedded Project** (Elser) = same as 7192 with Prof. Brümmer
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** (Ertel)
4 hrs/week 5 ECTS credits

6807 **Processes and Automation in Photovoltaics** (Fath)
4hrs/ 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

TECHNOLOGY MANAGEMENT AND OPTIMIZATION (MASTER PROGRAM) *Lectures offered in the frame of the TM&O Master program are open for Master students only*

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 (xx)*
2 hrs/week 3 ECTS credits

Process- and Cost Optimization
6459 Production Management and Optimization (Schmidthöfer, Klett)*
2 hrs/week 4 ECTS credits

6465 Value-Added Process Design (Smets)
2 hrs/week 2 ECTS credits

*in Engl. if there are students of ESC Troyes, otherwise held in German

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

1251 International Accounting/ International Financial Reporting (IFRS) (Dühnfort)
2 hrs/week 3 ECTS credits

3966 Energy Engineering and New Energy Production (Ziegler)
2 hrs/week 3 ECTS credits

3967 Quality Management (Nuoffer-Wagner)
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 (Excursions) (Klett)
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 (Niersbach)
2 hrs/week 3 ECTS credits

4305 Strategic Management (Willax)
2 hrs/week 3 ECTS credits

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 GO)
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

MASTER LEVEL - Lectures in English language in various study fields

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

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

7435 Software Security (Eggendorfer) (Computer Science – IN)
4 hrs/week 5 ECTS credits

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

6768 Game development for Master (Scherzer) (Computer Science - IN)
4hrs/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 (Kaufmann) (Product Dev. in Mech. Engineering - PEM)
2 hrs/week 3 ECTS credits credits

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

LANGUAGE LECTURES AND INTERCULTURAL SEMINARS (CLIC)

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 11 – 15, 2019

4634 DAF - Deutsch als Fremdsprache A2
4 hrs/week 4 ECTS credits
Attention: The course starts with an intensive program from March 11 – 15, 2019

4630 DAF - Deutsch als Fremdsprache B1+
Attention: The course starts with an intensive program from March 11 – 15, 2019
4 hrs/week 4 ECTS credits

4631 DAF - Deutsch als Fremdsprache B2
Attention: The course starts with an intensive program from March 11 – 15, 2019
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?

7382 Deutsch C1 für ausländische Studierende in den deutschen Studiengängen

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
2 hrs/week 2 ECTS credits

Several Professional English 1, B2 courses by study program e.g.
7753, 7486, 7378, 7456, 7487, 7488
4 hrs/week 5 ECTS credits

Several Professional English 2, B2 courses by study program e.g.
7137, 7142, 7367, AI4 Professional English 2, B2
2 hrs/week 2 ECTS credits

3995 **Advanced Communication Skills** C1 (Nakashima)
2 hrs/week 2 ECTS credits

7569 **English for Specific Purposes: Leading with Emotional Intelligence** (Hopkins)
2 hrs/week 2 ECTS credits

7377 **English for Specific Purposes: Focus on Mech. and Automotive Engineering** (Matter)
2 hrs/week 2 ECTS credits

7389 **Technical English – Inch by Inch** (Nakashima)
2 hrs/week 2 ECTS credits

7396 **English for Specific Purposes: English for Psychology** (Corjescu)
2 hrs/week 2 ECTS credits

7807 **English for Specific Purposes: English Robotics** (Mulder)
2 hrs/week 2 ECTS credits

Seminars on intercultural and other topics

4656 **Intercultural Sensitization (Ronssin and students)**
Block seminar 1 ECTS credit
Dates: 05.04. 16:00-19:15h; 06.04. 09:00-17:15h

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

7502 **Intercultural Communications - Talking effectively to the English-speaking world (Ironside)**
Block seminar: 2 ECTS credits
Dates: tba

7806 **Intercultural Competence for Professional English (Mallon-Gerland; daSilva)**
Block seminar 2 ECTS credits
Dates: tba

5149 **Working in International Scientific Project Teams (Mallon-Gerland)**
Block Seminar 1 ECTS credit
Dates: tba

3971 **Creative Problem Solving (Rudolph)**
Block seminar 3 ECTS credits
Dates: tba

6392 **The key to a successful job application; CV Writing and Interview Techniques (Ironside)**
Block seminar Exercise NO ECTS credits
Date: tba

Other language courses at various levels are offered

Tba: Arabic, French, Italian, Spanish, Portuguese, Turkish, Russian, (2-3 hours/week, 2-3 ECTS credits)