HOCHSCHULE RAVENSBURG-WEINGARTEN UNIVERSITY OF APPLIED SCIENCES

Summer Semester 2021 - 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** (Siggelkow)
4 hrs/week 5 ECTS credits
6804 **Tutorial analysis of electrical network** (Siggelkow?) - *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)
x 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** (?)
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

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 (Siggelkow)
2 hrs/week 2 ECTS
Module together with: 1438 Digital Technology Practical Training (2nd 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, Hidayatodin)
2 hrs/week 2 ECTS credits
1911 Circuit Design Practical Training (Ludescher, Weber)
2 hrs/week 2 ECTS credits

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

First Semester
4233 Electrical Engineering 1: Basics – Analysis of Electric Networks (Siggelkow)
4 hrs/week 5 ECTS credits
6804 Tutorial analysis of electrical network (Siggelkow?) - *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)
x 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** (?)
2 hrs/week 2 ECTS credits
Module together with: Basic Practical Course Electr. Eng. 2: Implementation & Verification (2nd 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, Hidayatodin)
4 hrs/week 2 ECTS credits
1911 **Circuit Design Practical Training** (Ludescher, Weber)
4 hrs/week 3 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

5248 **Mathematics Tutorial** (Berens)
x hrs/week 0 ECTS credits

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

1850 **Digital Technology** (Bonenberger)
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** (Kolacyak)
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

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

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

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

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, 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)
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!
Courses are held in Engl. 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 (Schmidthöfer, Klett)*
2 hrs/week 4 ECTS credits

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

INTERNATIONAL ACADEMY – ONE OR TWO SEMESTERS OF INTERDISCIPLINARY STUDY PROGRAM IN ENGLISCH ON BACHELOR LEVEL (TAKING SINGLE/ INDIVIDUAL COURSES IS ALSO POSSIBLE) – SOME NEW COURSES!

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In order to receive an RWU certificate for the International Academy students have to earn a minimum of 30 ECTS per semester incl. at least one practical project and one German course, as well as some compulsory and some elective courses.

xxxx Cross cultural communication and team work (Prof. Eberhard Hohl) - compulsory
2 hrs/week 3 ECTS credits

3971 **Creative Problem Solving** (Frank Rudolph)
2 hrs/week 3 ECTS credits

xxxx **Entrepreneurship** (Prof. Sonia López Sáiz)
2 hrs/week 3 ECTS credits

xxxx **Practial Sales Project Seminar** (Thomas Fuss) - compulsory
2 hrs/week 5 ECTS credits

xxxx **Research Methods in Business Marketing** (Nayam Kadam)
2 hrs/week 5 ECTS credits

4474 **New Technologies and Trends** (Robert Jenke)
2 hrs/week 5 ECTS credits

xxxx **B2B Marketing & Sales** (Prof. Barbara Niersbach) - compulsory
2 hrs/week 5 ECTS credits

xxxx **Entrepreneurial Leadership** (Prof. Opas Piansoongnern)
2 hrs/week 3 ECTS credits

4475 + 1473 **Systems Engineering and Practical Training** (Prof. Andreas Pufall)
4hrs/week 5 ECTS credits

4156 **Innovation Management** (Prof. Frank Ermark)
2 hrs/week 3 ECTS credits

xxxx **Business Analysis and Valuation** (Prof. Cornelia Neff)
2 hrs/week 3 ECTS credits

+ one of the language courses (compulsory)

xxxx **DaF German as a German language** A1, A2, B1, B2 (pls. see language lectures offered further down this list by CLIC)
4 hrs/week 4 ECTS credits

OR
xxxx **Business German 1** (Dr. Judit Török)
(for Business German you need to have finished successfully an A2 course in German)
4 hrs/week 4 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 (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)
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 (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

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 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 ? with regular weekly courses; you need to do the placement test, and if you are indeed at C1 level you could still participate in the B2 Intensive Course as a refresher and then start your C1 course with the beginning of the regular lectures

DAF – Tutorial Course A1/ DAF – Tutorial Course A2 might be offered
Will be decided shortly before semester start

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 shortly before the begin of the semester (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 shortly before the begin of the semester (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

There may be changes, please check online for courses available shortly before the begin of the semester (LSF)

Seminars on intercultural and other topics

4656 Intercultural Sensitization (Ronssin and students)
Block seminar 1 ECTS credit
Please check LSF for exact dates shortly before semester begins

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 shortly before semester begins

5149 Working in International Scientific Project Teams (Rudolph)
Block Seminar 1 ECTS credit
Please check LSF for exact dates shortly before semester begins

3971 Creative Problem Solving (Rudolph)
Block seminar 3 ECTS credits
Please check LSF for exact dates shortly before semester begins

8034 Cross-Cultural Communication and team work (Rudolph)
Block seminar 2 ECTS credits
Please check LSF for exact dates shortly before semester begins

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)