



## List of courses taught in English – 2020/21 (Fall 2020)

THU is offering a variety of courses taught in English. Please note that the programs have different semester times

| Academic Calendar  |   |  |
|--|---|--|
| International Engineering Programs<br>IMEP, ICEP and IEEP<br>(3-month-program) | <u>Fall semester:</u><br><br>Exams:                     | <b>IMEP:</b> October – December + free intensive German course in September<br>Mid-December  |
|  | <u>Spring semester:</u><br><br>Exams:<br>Holidays:      | <b>ICEP + IEEP:</b> April - June + free intensive German course in March<br>(Possibility for IEEP students to stay for a laboratory project in July)<br>last week of June<br>2 weeks in May/June (Pentecost) |
| Regular Semester Programs  | <u>Fall semester</u><br>Start:<br>Holidays:<br>Exams:   | Beginning of October<br>2 weeks in Dec/Jan (Christmas)<br>first 2 weeks of February  |
|  | <u>Spring semester</u><br>Start:<br>Holidays:<br>Exams: | Beginning of March<br>2 weeks in May/June (Pentecost)<br>last 2 weeks of July  |

### **A) International Engineering Program (IEP) - 3-month-program**

- International Mechanical Engineering Program – IMEP
- International Electrical Engineering Program – IEEP
- International Computer Engineering Program - ICEP

### **B) Full semester programs**

- International Semester Program in Energy Economics – SPEEC
- International Semester Program in Business – SPiB
- Digital Media Program - SPDM
- Bachelor Degree Program in Computer Science - SPCTS
- Courses offered by different faculties

### **C) Master-Level Courses taught in English**

- M. Sc. Degree Program in Information Systems
- M. Eng. Degree Program in Medical Devices – Research and Development
- Courses offered by different faculties

### **D) German Language courses**


**A) International Engineering Program (IEP) - 3 Month Program**

Please note: Semester times are different from our regular semester times.  
 Detailed course description: [www.hs-ulm.de/internationals](http://www.hs-ulm.de/internationals) (Downloads)



| Department / Study Program           | Lecturer                    | Title   | ECTS credits | Fall semester<br>1. Oct - 23. Dec | Spring semester<br>1. April - 30. June |
|--------------------------------------|-----------------------------|---|--------------|-----------------------------------|--|
| <b>Production Engineering / IMEP</b> |                             |   |              |                                   |  |
| <b>IMEP</b>                          | Peranio                     | Mathematics for Engineers (Intensive course September)  | 1            | X                                 |  |
|                                      | t.b.a.                      | German for Beginners 1 (Intensive Course September)   | 2            | X                                 |  |
|                                      | t.b.a.                      | Ankommen in Deutschland – Language and Culture (Previous knowledge of A2 required) (Intensive Course September) | 2            | X                                 |  |
|                                      | Wehrheim / Böhm             | CAD/CAM   | 4            | X                                 |  |
|                                      | Beckmann                    | Dynamics I  | 4            | X                                 |  |
|                                      | Beckmann                    | Dynamics II   | 4            | X                                 |  |
|                                      | Hüser / Hartberger          | Lean Production Systems   | 4            | X                                 |  |
|                                      | Commerell                   | System Automation   | 4            | X                                 |  |
|                                      | Renze                       | Applied Thermal-Fluid Systems   | 4            | X                                 |  |
|                                      | Arlitt                      | Fluid Mechanics   | 4            | X                                 |  |
|                                      | Kabza                       | Fuel Cells  | 4            | X                                 |  |
|                                      | Watty                       | Collaborative Product Development (CPD)   | 4            | X                                 |  |
| <b>Electrical Engineering / IEEP</b> |                             |   |              |                                   |  |
| <b>IEEP</b>                          | Terzis                      | Digital Integrated Circuits   | 4            |                                   | X                                      |
|                                      | Beckmann                    | Control Technology  | 4            |                                   | X                                      |
|                                      | Professors of EE Department | EE Advanced Project Work  | 4            |                                   | X                                      |
| <b>Computer Engineering / ICEP</b>   |                             |   |              |                                   |  |
| <b>ICEP</b>                          | Schäffter                   | Computer Networks   | 4            |                                   | X                                      |
|                                      | Frey                        | Machine Vision  | 4            |                                   | X                                      |
|                                      | Hering / Steiper            | Operating Systems   | 4            |                                   | X                                      |
|                                      | Strahnen                    | Computer Architecture   | 4            |                                   | X                                      |
| <b>Social Sciences</b>               |                             |   |              |                                   |  |
| IMEP                                 | McLeod                      | Germany within Europe   | 4            | X                                 |  |
| I / ICEP and E / IEEP                | Kratzer                     | Germany In The Last Three Centuries   | 4            |                                   | X                                      |



## **B) Full Semester programs (Bachelor Level)**

Those courses are offered during the German regular semester times, mixing IEP courses and semester program courses is **NOT possible**. Please note: It is possible that courses may take place at the same time. Students should choose only courses from one department.

\*students should choose either Block 1 or 2 to avoid overlappings of courses

Detailed course description of SPEEC and SPiB: [www.hs-ulm.de/internationals](http://www.hs-ulm.de/internationals) (Downloads)

| Department / Study Program   | Lecturer           | Title                                 | ECTS credits | Fall semester<br>(October - February) | Spring semester<br>(March - July) | Course code / specific information |
|--|--------------------|---------------------------------------|--------------|---------------------------------------|-----------------------------------|------------------------------------|
| <b>P</b> Department of Production Engineering and Production Economics /<br>International Semester Program in Energy Economics - SPEEC |                    |                                       |              |                                       |                                   |                                    |
| P / SPEEC – Block 1*   | Otto/Schlüter      | Operations Research                   | 5            | X                                     | X                                 |                                    |
| P / SPEEC – Block 1*   | Gaisbauer-Pointner | Performance Management                | 5            | X                                     | X                                 | CKLM                               |
| P / SPEEC – Block 1*   | Herbort            | Analytics for Energy Data             | 5            | X                                     | X                                 | AFED                               |
| P / SPEEC – Block 1*   | Kleiser            | Energy Efficiency                     | 5            | X                                     | X                                 |                                    |
| P / SPEEC – Block 1*   | Böhm               | Power Plant Technology                | 5            | X                                     | X                                 | KRAT                               |
| P / SPEEC – Block 2*   | Otto               | Energy Trading and Risk Management    | 5            | X                                     | X                                 | ETRM                               |
| P / SPEEC – Block 2*   | Heilscher          | Energy Data Management                | 5            | X                                     | X                                 | EDAT                               |
| P / SPEEC – Block 2*   | Otto / Heilscher   | Seminar in Energy Economics           | 5            | X                                     | X                                 |                                    |
| P / SPEEC – Block 2*   | Iniotakis          | Simulation                            | 5            | X                                     | X                                 |                                    |
| P / SPEEC – Block 1 + 2*   | Heilscher / Arlitt | Energy Meteorology                    | 5            | X                                     |                                   |                                    |
| P / SPEEC – Block 1 + 2*   | Cürten             | Intercultural Communication           | 2            | X                                     | X                                 |                                    |
| P / SPEEC – Block 1 + 2*   | Dippe              | Leadership and Business Communication | 5            | X                                     | X                                 |                                    |
| P / SPEEC – Block 1 + 2*   | All professors     | Project in Energy Economics           | 10           | X                                     | X                                 |                                    |



| Department / Study Program  | Lecturer           | Title                                      | ECTS credits | Fall semester<br>(October - February) | Spring semester<br>(March - July) | Course code / specific information |
|---|--------------------|--|--------------|---------------------------------------|-----------------------------------|------------------------------------|
| <b>P</b> Department of Production Engineering and Production Economics /<br>International Semester Program in Business - SPiB |                    |  |              |                                       |                                   |                                    |
| P / SPiB  | Gaisbauer-Pointner | Performance Management and Cost Accounting | 5            | X                                     | X                                 | See prerequisites                  |
| P / SPiB  | Dippe              | Leadership and Business Communication      | 5            | X                                     | X                                 |                                    |
| P / SPiB  | Cürten             | Cross Cultural Management                  | 5            | X                                     | X                                 |                                    |
| P / SPiB  | Gaisbauer-Pointner | Sustainability and the Environment         | 5            |                                       | X                                 | See prerequisites                  |
| P / SPiB  | Otto / Schlüter    | Operations Research                        | 5            | X                                     | X                                 |                                    |
| P / SPiB  | Otto               | Energy Trading and Risk Management         | 5            | X                                     | X                                 |                                    |
| P / SPiB  | Iniotakis          | Simulation                                 | 5            | X                                     | X                                 |                                    |
| P / SPiB  | McLeod             | Germany within Europe                      | 4            | X                                     |                                   |                                    |
| P / SPiB  | Kratzer            | Germany within the last three centuries    | 4            |                                       | X                                 |                                    |
| P / SPiB  | Cürten             | Intercultural Communication                | 2            | X                                     | X                                 |                                    |
| P / SPiB  | All professors     | Project in Energy Economics                | 10           | X                                     | X                                 |                                    |

| Department / Study Program   | Lecturer           | Title                                     | ECTS credits | Fall semester<br>(October - February) | Spring semester<br>(March - July) | Course code / specific information |
|--|--------------------|---|--------------|---------------------------------------|-----------------------------------|------------------------------------|
| <b>P Department of Production Engineering and Production Economics</b>       |                    |   |              |                                       |                                   |                                    |
| P / Production Engineering   | Baumgärtel         | Distribution Logistics                    | 6 (4)        | X                                     | X                                 |                                    |
| P / Production Engineering   | Stöhler            | Business Information Systems              | 4            | X                                     | X                                 |                                    |
| P / Production Engineering   | Heilscher / Arlitt | Energy Meteorology                        | 5            | X                                     |                                   |                                    |
| P / Production Engineering   | Commerell          | System Automation                         | 4            | X                                     | X                                 |                                    |
| P / Production Engineering   | Commerell          | Energy Storages                           | 4            | X                                     | X                                 |                                    |
| P / Production Engineering   | t.b.a.             | Advanced Project                          | 5-10         | X                                     | X                                 |                                    |
| <b>I Department of Computer Science</b>                                      |                    |   |              |                                       |                                   |                                    |
| <b>I / Computer Science: Complete Bachelor Program is offered in English</b> |                    |   |              |                                       |                                   |                                    |
| 1. Semester courses:   |                    |   |              |                                       |                                   |                                    |
|  | Groß               | Linear Algebra                            | 5            | X                                     |                                   |                                    |
|  | Steiper            | Introduction to Computer Science          | 5            | X                                     |                                   |                                    |
|  | Kratzer            | Programming 1                             | 5            | X                                     |                                   |                                    |
|  | Frey               | Technical Foundations of Computer Science | 5            | X                                     |                                   |                                    |
| 2. Semester courses  |                    |   |              |                                       |                                   |                                    |
|  | Groß               | Calculus 1                                | 5            |                                       | X                                 |                                    |
|  | Kratzer            | Programming 2                             | 5            |                                       | X                                 |                                    |
|  | Steiper            | Computer Networks                         | 5            |                                       | X                                 |                                    |
|  | Kratzer            | Databases                                 | 5            |                                       | X                                 |                                    |
|  | Strahnen           | Microcomputer Technology                  | 5            |                                       | X                                 |                                    |

| Department / Study Program           | Lecturer  | Title                           | ECTS credits | Fall semester (October - February) | Spring semester (March - July) | Course code / specific information |
|--------------------------------------|-----------|---------------------------------|--------------|------------------------------------|--------------------------------|------------------------------------|
| <b>3. Semester courses</b>           |           |                                 |              |                                    |                                |                                    |
|                                      | Otto      | Calculus 2                      | 5            | X                                  |                                |                                    |
|                                      | Baer      | Programming 3                   | 5            | X                                  |                                |                                    |
|                                      | Schied    | Theoretical Computer Science    | 5            |                                    | X                              |                                    |
| <b>4. Semester courses</b>           |           |                                 |              |                                    |                                |                                    |
|                                      | Baer      | Software Engineering            | 5            |                                    | X                              |                                    |
|                                      | Traub     | Operating systems               | 5            |                                    | X                              |                                    |
|                                      | Schied    | Algorithms and Data Structures  | 5            |                                    | X                              |                                    |
|                                      | Groß      | Stochastic                      | 5            |                                    | X                              |                                    |
| <b>5. Semester courses</b>           |           |                                 |              |                                    |                                |                                    |
|                                      | NN        | Seminar                         | 5            | X                                  |                                |                                    |
|                                      | Schäffter | Distributesd & Webbased Systems | 5            | X                                  |                                |                                    |
|                                      | NN        | Software Project                | 5            | X                                  |                                |                                    |
| <b>6. Semester courses</b>           |           |                                 |              |                                    |                                |                                    |
|                                      | Dippe     | Business Economics              | 5            |                                    | X                              |                                    |
| <b>Special Subjects / Electives:</b> |           |                                 |              |                                    |                                |                                    |
| 3. Semester                          | Frey      | Digital Systems                 | 5            | X                                  |                                | admission restricted               |
| 3. Semester                          | Strahnen  | Embedded Systems                | 5            | X                                  |                                | admission restricted               |
| 3. Semester                          | Schäffter | Information Security Management | 5            | X                                  |                                | admission restricted               |
| 3. Semester                          | Graf      | Mobile Application Development  | 5            | X                                  |                                | admission restricted               |
| 3. Semester                          | Frey      | Machine Vision                  | 5            | X                                  |                                | admission restricted               |
| 4. Semester                          | Frey      | Hardware oriented Programming   | 5            |                                    | X                              | admission restricted               |
| 4. Semester                          | Schlegel  | Realtime Systems                | 5            |                                    | X                              | admission restricted               |
| 4. Semester                          | Schäffter | Digital Forensics               | 5            |                                    | X                              | admission restricted               |



| Department / Study Program                                  | Lecturer           | Title                                | ECTS credits | Fall semester (October - February) | Spring semester (March - July) | Course code / specific information                    |
|---|--------------------|--------------------------------------|--------------|------------------------------------|--------------------------------|---|
| 4. Semester   | Traub/Buchenscheit | Web Engineering                      | 5            | X                                  | X                              | admission restricted                                  |
| 4. Semester   | Hasbargen          | Game Programming                     | 5            |                                    | X                              | admission restricted                                  |
| 5. Semester   | Strahlen           | Computer Architecture                | 5            | X                                  |                                | admission restricted                                  |
| 5. Semester   | Schlegel           | Autonomous Systems                   | 5            | X                                  |                                | admission restricted                                  |
| 5. Semester   | Schäffter          | Pentesting                           | 5            | X                                  |                                | admission restricted                                  |
| 5. Semester   | Steiper            | Adhoc & Sensor Networks              | 5            | X                                  |                                | admission restricted                                  |
| 5. Semester   | Franz              | Computer Graphics                    | 5            | X                                  |                                | admission restricted                                  |
| <b>I / Business information Systems</b>                     | Herbort            | Database Programming                 | 5            | X                                  | X                              | Please ask for Pre-requisites                         |
| <b>I / Business information Systems</b>                     | Goldstein          | Data Warehousing                     | 5            | X                                  | X                              | admission restricted<br>Please ask for Pre-requisites |
| <b>I / Data Science in Medicine</b>                         | Vögel              | Medical Information Systems          | 5            | X                                  | X                              |   |
| <b>T Department of Medical Engineering and Mechatronics</b> |                    |                                      |              |                                    |                                |   |
| <b>T / Mechatronics</b>                                     | Kern               | Problem solving in mech. Engineering | 5            |                                    | X                              | 92700   |
| <b>T / Mechatronics / Medical Engineering</b>               | Groß/Blehschmidt   | Microcontroller Applications         | 5            | X                                  | X                              | 89500   |
| <b>T / Medical Engineering</b>                              | Blehschmidt        | Technical Security in Medicine       | 5            |                                    | X                              | 91100   |
| <b>T / Mechatronics / Medical Engineering</b>               | t.b.a.             | Advanced Project                     | 10           | X                                  | X                              |   |



| Department / Study Program  | Lecturer   | Title                          | ECTS credits | Fall semester (October - February) | Spring semester (March - July) | Course code / specific information |
|---|------------|--------------------------------|--------------|------------------------------------|--------------------------------|------------------------------------|
| <b>M</b> Department of Mechanical and Automotive Engineering  |            |                                |              |                                    |                                |                                    |
| M / Mechanical Engineering  | Niebergall | Mobile Hydraulics              | 5            | X                                  |                                |                                    |
| <b>E</b> Department of Electrical Engineering and Information Technology / Digital Media - open for enrollment ONLY for design students |            |                                |              |                                    |                                |                                    |
| E / Digital Media Program   | Radtke     | Corporate Design               | 8            | X                                  |                                |                                    |
| E / Digital Media Program   | Götz       | Ergonomics / Universal Design  | 5            | X                                  | X                              |                                    |
| E / Digital Media Program   | Gaida      | Image Conception               | 5            | X                                  |                                |                                    |
| E / Digital Media Program   | Gerbaulet  | Interaction Design 1           | 10           | X                                  |                                |                                    |
| E / Digital Media Program   | Kruse      | Motion Capturing               | 5            | X                                  | Demand necessary               |                                    |
| E / Digital Media Program   | Radtke     | Color Design                   | 5            |                                    | X                              |                                    |
| E / Digital Media Program   | Hofmann    | Computer Graphics              | 7            |                                    | X                              |                                    |
| E / Digital Media Program   | Radtke     | E-Learning                     | 8            |                                    | X                              |                                    |
| E / Digital Media Program   | Gaida      | Photography                    | 7            |                                    | X                              |                                    |
| E / Digital Media Program   | Gerbaulet  | Interaction Design 2           | 5            |                                    | X                              |                                    |
| E / Digital Media Program   | Radtke     | Typography                     | 5            |                                    | X                              |                                    |
| E / Digital Media Program   | Radtke     | 2D-Animation                   | 5            | X                                  |                                |                                    |
| E / Digital Media Program   | Radtke     | Type in Motion/Signs Go Global | 5            |                                    | X                              |                                    |
| E / Digital Media Program   | Lunde      | Programming 1<br>Programming 2 | 5<br>5       | X                                  | X                              |                                    |





### C) Master-Level Courses taught in English

| Department / Study Program  | Lecturer                                       | Title                                    | ECTS credits | Fall Semester (October - February) | Spring Semester (March - July) |
|---|--|--|--------------|------------------------------------|--------------------------------|
| I / Master Information Systems  | Complete M. Sc Program is offered in English   |  | 90           | X                                  | X                              |
| <a href="https://studium.hs-ulm.de/en/Pages/Studiengang_IS.aspx?SearchCategory=Master;">https://studium.hs-ulm.de/en/Pages/Studiengang_IS.aspx?SearchCategory=Master;</a> |  |  |              |                                    |                                |
| T / Medical Devices - Research and Development  | Complete M. Eng. Program is offered in English |  | 90           | X                                  | X                              |
| <a href="https://studium.hs-ulm.de/en/Pages/Studiengang_MM.aspx?SearchCategory=Master;">https://studium.hs-ulm.de/en/Pages/Studiengang_MM.aspx?SearchCategory=Master;</a> |  |  |              |                                    |                                |
| T / Medical Devices (Master)  | Munz   | Scientific Computing                     | 6            | X                                  |                                |
| T / Medical Devices (Master)  | Munz   | Software for Medical Devices             | 6            |                                    | X                              |
| T / Medical Devices (Master)  | Munz   | Image Analysis and Machine Learning      | 6            |                                    | X                              |
| E / Master SYE and SYE intl. resp.  | Hartmann / Weiss                               | Numerical Optimization                   | 6            |                                    | X                              |
| E / Master SYE and SYE intl. resp.  | Mantz / Moisel                                 | Physical Methods                         | 6            |                                    | X                              |
| E / Master SYE and SYE intl. resp.  | Bank / Commerell                               | Modeling of Technical Systems            | 6            |                                    | X                              |
| E / Master SYE and SYE intl. resp.  | Bank   | Model-Based Systems Development          | 6            |                                    | X                              |
| E / Master SYE and SYE intl. resp.  | M. von Schwerin / Schlick                      | Embedded Systems                         | 6            |                                    | X                              |
| P / Master SYI Logistics  | Baumgärtel                                     | Supply Network Performance Management    | 5            | X                                  |                                |
| P / Master SYI Logistics  | Baumgärtel                                     | Quantitative Planning Methods            | 5            |                                    | X                              |
| G / Institute of foreign Language and Management  | Dippe  | International Business (Master-Program ) | 5            | X                                  | X                              |

**D) German Language courses**

| Department   | Title   | ECTS | Fall Semester | Spring Semester |
|--|---|------|---------------|-----------------|
| G / Institute of foreign Language and Management (IFM) | German for Beginners 1 - Intensive Course September   | 2    | X             |                 |
| G / Institute of foreign Language and Management (IFM) | Ankommen in Deutschland – Language and Culture (Previous knowledge of A2 required) Intensive Course September | 2    | X             |                 |
| G / Institute of foreign Language and Management (IFM) | German for Beginners 1 - Intensive Course March   | 2    |               | X               |
| G / Institute of foreign Language and Management (IFM) | Ankommen in Deutschland Intensive Course March  | 2    |               | X               |
| G / Institute of foreign Language and Management (IFM) | German Beginners Level 1  | 2    | X             | X               |
| G / Institute of foreign Language and Management (IFM) | German Beginners Level 2  | 3    | X             | X               |
| G / Institute of foreign Language and Management (IFM) | German Beginners Level 3  | 5    | X             | X               |
| G / Institute of foreign Language and Management (IFM) | German Beginners Level 4  | 5    | X             | X               |
| G / Institute of foreign Language and Management (IFM) | German intermediate Level 1   | 5    | X             | X               |
| G / Institute of foreign Language and Management (IFM) | German intermediate Level 2   | 5    | X             | X               |