

English Module List

Fall Semester 2024 / 25



The ZHAW - School of Engineering offers numerous English taught modules for Incoming Exchange Students - some remarks for clarification:

- **For Bachelor Exchange students**, on this document the modules for the fall semester are listed.
- Marked in blue, is a suggested set of modules you do not encounter any conflicts in schedule
- This list is subject to changes.
- The exchange students may choose modules out of all programs.
- Students who have German language skills level B2, may attend all modules.
<https://www.zhaw.ch/en/engineering/study/bachelors-degree-programmes/>
- **For Master Exchange students**, the program is entirely taught in English. ZHAW School of Engineering offers the following eleven master profiles: Aviation, Business Engineering, Civil Engineering, Computer Science, Data Science, Electrical Engineering, Energy and Environment, Mechanical Engineering, Mechatronics and Automation, Medical Engineering, Photonics.
- Detailed information is available under
<https://www.zhaw.ch/en/engineering/study/masters-degree-programmes/>

If you need any further information, please feel free to contact:

ZHAW School of Engineering Exchange exchange.engineering@zhaw.ch

Aviation

Module Name	Module Code	ECTS Credits	Term	Semester
Aircraft Systems - Structure and Mechanical Systems	t.BA.AV.ACSYS-SM-EN.19HS	4	Fall	3 rd semester
Human Factors	t.BA.AV.HF-EN.19HS	4	Fall	3 rd semester
Physics 3: Atmospheric Physics and Applied Meteorology	t.BA.AVP.PHYMET-EN.19HS	4	Fall	3 rd semester
Numerical and Experimental Aerodynamics	t.BA.WV.NEA-EN.19HS	4	Fall	5 th semester
Project Thesis: Aviation	t.BA.AV.PA-EN.19HS	6	Fall	5 th semester
Systems Reliability, Availability, Maintainability and Safety	t.BA.AVV.RAMS-EN.22HS	4	Fall	5 th semester
Aircraft Systems - Control Systems	t.BA.AVV.ACSYS-CS-EN.22HS	4	Fall	5 th semester
Advanced Mechanics	t.BA.AVV.ADV-MECH-EN.22HS	4	Fall	5 th semester
Flight Operations	t.BA.AVV.FL-OPS-EN.22HS	4	Fall	5 th semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Principles and Applications of the IoT	t.BA.WVU.PRIAP-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Blockweek Introduction to AI for Engineers (CW 37 before semester start)	t.BA.WVK.BW-INTAI-EN.24HS	2	Fall	
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall	
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

*availability depending on number of students

Computer Science

Module Name	Module Code	ECTS Credits	Term	Semester
Cloud Computing 1	t.BA.WV.CCP1-EN.19HS	4	Fall	5 th semester
Software and System Security 1	t.BA.WV.SWS1-EN.19HS	4	Fall	5 th semester
Internet of Things 1	t.BA.WV.IOT1-EN.19HS	4	Fall	5 th semester
Communication Networks and Services 1	t.BA.WV.CNS1-EN.19HS	4	Fall	5 th semester
Scientific Computing	t.BA.WV.SCC-EN.19HS	4	**Fall	5 th semester
Project Thesis: Computer Science	t.BA.IT.PA-EN.19HS	6	Fall	5 th semester
Artificial Intelligence 1	t.BA.WV.AI1-EN.19HS	4	Fall	5 th semester
System on Chip Design	t.BA.WV.SCD-EN.19HS	4	Fall	5 th semester
Serverless and Cloud Application Development	t.BA.WV.SCAD-EN.20HS	4	Fall	5 th semester
Digital Image Processing 1	t.BA.WV.DIP-EN.19HS	4	Fall	5 th semester
Reinforcement Learning	t.BA.WV.RL-EN.23HS	4	Fall	5 th semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/27 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

* availability depending on number of students

** takes place in Zurich

Data Science

Module Name	Module Code	ECTS Credits	Term	Semester
Data Products and Services	t.BA.DS.DPS-EN.20HS	4	Fall	3 rd semester
Project Thesis: Data Science	t.BA.DS.PA-EN.20HS	6	Fall	5 th semester
Service Engineering Basics	t.BA.WIV.SEG-EN.22HS	4	Fall	5 th semester
Internet of Things 1	t.BA.WV.IOT1-EN.19HS	4	Fall	5 th semester
Reinforcement Learning	t.BA.WV.RL-EN.23HS	4	Fall	5 th semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Principles and Applications of the IoT	t.BA.WVU.PRIAP-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester
Time Series Prediction	t.BA.WV.TSP-EN.24HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/27 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall
Blockweek Summer School Creating Meaningful and Impactful Solutions (CW 36 before semester start)	t.BA.WVK.BW-CMIS-EN.24HS	2	Fall
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall

* availability depending on number of students

Electrical Engineering

Module Name	Module Code	ECTS Credits	Term	Semester
Digital Image Processing 1	t.BA.WV.DIP-EN.19HS	4	Fall	5 th semester
Internet of Things 1	t.BA.WV.IOT1-EN.19HS	4	Fall	5 th semester
System on Chip Design	t.BA.WV.SCD-EN.19HS	4	Fall	5 th semester
Communication Networks and Services 1	t.BA.WV.CNS1-EN.19HS	4	Fall	5 th semester
Project Thesis: Electrical Engineering	t.BA.ET.PA-EN.19HS	6	Fall	5 th semester
Automation 1	t.BA.WV.AUT1-EN.19HS	4	Fall	5 th semester
Electronics Project 1	t.BA.ET.PM3-EN.19HS	4	Fall	3 rd semester
Computer Engineering 1	t.BA.XX.CT1-EN.13HS	4	Fall	3 rd semester
Signals and Systems 1	t.BA.XX.SISY1-EN.13HS	4	Fall	3 rd semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Blockweek Introduction to AI for Engineers (CW 37 before semester start)	t.BA.WVK.BW-INTAI-EN.24HS	2	Fall	
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall	
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

*availability depending on number of students

Energy and Environmental Engineering

Module Name	Module Code	ECTS Credits	Term	Semester
Project Thesis: Energy and Environmental Engineering	t.BA.EU.PA-EN.19HS	6	Fall	5 th semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Principles and Applications of the IoT	t.BA.WVU.PRIAP-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Blockweek Introduction to AI for Engineers (CW 37 before semester start)	t.BA.WVK.INTAI-EN.23HS	2	Fall	
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall	
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

*availability depending on number of students

Engineering and Management

Module Name	Module Code	ECTS Credits	Term	Semester
Physics 3: Factory Physics	t.BA.WIP.FAP-EN.19HS	4	Fall	3 rd semester
Advanced Regression Modelling	t.BA.WIV.ARM-EN.22HS	4	Fall	5 th semester
Databases	t.BA.WIV.DB-EN.22HS	4	Fall	5 th semester
Project Thesis: Engineering and Management	t.BA.WI.PA-EN.19HS	6	Fall	5 th semester
Financial Enterprise Modelling	t.BA.WI.FUM-EN.19HS	4	Fall	3 rd semester
Basics of Statistics	t.BA.XX.GSTAT-EN.20HS	4	Fall	3 rd semester
Simulation of Business Processes	t.BA.WIV.SIM-EN.22HS	4	Fall	5 th semester
Service Engineering Basics	t.BA.WIV.SEG-EN.22HS	4	Fall	5 th semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Principles and Applications of the IoT	t.BA.WVU.PRIAP-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Blockweek Introduction to AI for Engineers (CW 37 before semester start)	t.BA.WVK.BW-INTAI-EN.24HS	2	Fall	
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall	
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

*availability depending on number of students

Mechanical Engineering

Module Name	Module Code	ECTS Credits	Term	Semester
Thermodynamics	t.BA.XX.FTH2-EN.19HS	4	Fall	3 rd semester
Mechanical Vibrations	t.BA.MT.MDYN-EN.19HS	4	Fall	5 th semester
Systems and Automation Technology 1	t.BA.MTV.SYAT1-EN.22HS	4	*Fall	5 th semester
Project Thesis: Mechanical Engineering	t.BA.MT.PA-EN.19HS	6	Fall	5 th semester
Measurement and Control Systems 1	t.BA.MT.MRT1-EN.19HS	2	Fall	3 rd semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall
Blockweek Introduction to AI for Engineers (CW37 before semester start)	t.BA.WVK.BW-INTAI-EN.24HS	2	Fall
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall

*availability depending on number of students

Medical Informatics

Module Name	Module Code	ECTS Credits	Term	Semester

For this study program there are only German modules available. In case you hold a German B2 Certificate you may select modules from its [curriculum](#).

Mobility Science

Module Name	Module Code	ECTS Credits	Term	Semester
Project Thesis: Transport systems	t.BA.VS.PA-EN.19HS	6	Fall	5 th semester

Options from other Engineering Programs

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Principles and Applications of the IoT	t.BA.WVU.PRIAP-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Blockweek Introduction to AI for Engineers (CW 37 before semester start)	t.BA.WVK.INTAI-EN.23HS	2	Fall	
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

*availability depending on number of students

Systems Engineering

Module Name	Module Code	ECTS Credits	Term	Semester
Product Development for Systems Engineering 3	t.BA.ST.PM3-EN.19HS	4	Fall	3 rd semester
Signals and Systems 1	t.BA.XX.SISY1-EN.13HS	4	Fall	3 rd semester
Automation 1	t.BA.WV.AUT1-EN.19HS	4	Fall	5 th semester
System on Chip Design	t.BA.WV.SCD-EN.19HS	4	Fall	5 th semester
Industrial Design: Basic Principles	t.BA.WV.INDE-EN.19HS	4	Fall	5 th semester
Digital Image Processing 1	t.BA.WV.DIP-EN.19HS	4	Fall	5 th semester
Project Thesis: Systems Engineering	t.BA.ST.PA-EN.19HS	6	Fall	5 th semester
Computer Engineering 1	t.BA.XX.CT1-EN.13HS	4	Fall	3 rd semester
Additive Manufacturing (3D printing)	t.BA.WV.AFV-EN.19HS	4	Fall	5 th semester

Options from other Engineering Programs

due to the structure of the curriculum, you can only choose one module from this group

Digital Health	t.BA.WVU.DHEAL-EN.23HS	4	Fall	5 th semester
Introduction to Computer and Communication Security	t.BA.WVU.INCSEC-EN.23HS	4	Fall	5 th semester
Principles and Applications of the IoT	t.BA.WVU.PRIAP-EN.23HS	4	Fall	5 th semester
Rapid Software Prototyping for Engineering Science	t.BA.WVU.RASOP-EN.23HS	4	Fall	5 th semester
Safety and Systems Engineering	t.BA.WVU.SASEN-EN.23HS	4	Fall	5 th semester

Context modules

Blockweek Bionics (CW 36/37 before semester start)	t.BA.WVK.BW-BION-EN.24HS	2	Fall	
Blockweek Introduction to AI for Engineers (CW37 before semester start)	t.BA.WVK.BW-INTAI-EN.24HS	2	Fall	
Intercultural Communication and Management	t.BA.XWK.ICAM-EN.22HS	2	Fall	
English for Academic Purposes	t.BA.WVK.EAP-EN.20HS	2	Fall	
German for Beginners	t.BA.XX.GFB.17HS	2	* Fall	
Introductions to Swiss Society and Politics	t.BA.XX.ISSP-EN.21HS	2	* Fall	

*availability depending on number of students