



# Zurich University of Applied Sciences School of Engineering



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

- **For Bachelor Exchange students**, in this document the modules open for the fall semester are listed. This list is subject to changes.
- The exchange students can choose modules out of all programs.
- Students who have German language skills level B2, can of course attend all modules.  
<https://www.zhaw.ch/de/engineering/studium/bachelorstudium/>
- **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-programme/profiles/>

If you need any further information, please feel free to contact:  
ZHAW School of Engineering Exchange [exchange.engineering@zhaw.ch](mailto:exchange.engineering@zhaw.ch)



# Aviation

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Aircraft Systems - Structure and Mechanical Systems	t.BA.AV.ACSYS-SM-EN.19HS	4	Fall	3. Semester
Human Factors	t.BA.AV.HF-EN.19HS	4	Fall	3. Semester
Physics 3: Atmospheric Physics and Applied Meteorology	t.BA.AVP.PHYMET-EN.19HS	4	Fall	3. Semester
Maintenance, Airworthiness Management, Regulations and Operator Organisation	t.BA.WV.MARO-EN.20HS	4	Fall	5. Semester
Numerical and Experimental Aerodynamics	t.BA.WV.NEA-EN.19HS t.BA.AV.ACSYS-SM-EN.19HS	4	Fall	5. Semester
Project / Thesis: Aviation	t.BA.AV.PA-EN.19HS	6	Fall	5. Semester
Aircraft Systems - Control Systems	t.BA.WV.ACSYS-CS-EN.19HS	4	Fall	5. Semester
Advanced Mechanics	t.BA.WV.ADV-MECH-EN.19HS	4	Fall	5. Semester
Flight Operations	t.BA.WV.FL-OPS-EN.19HS	4	Fall	5. Semester
Systems Reliability, Availability, Maintainability and Safety	t.BA.WV.RAMS-EN.19HS	4	Fall	5. Semester
<i>Total Credits</i>		42		

Summer Schools – Restricted places available. Please contact Christoph Regli ([christoph.regli@zhaw.ch](mailto:christoph.regli@zhaw.ch)) to check options and requirements once accepted for the exchange semester.

ATM Summer School	t.BA.WV.ATMSS-EN.19HS	4	During the summer semester break
Flight Test Laboratory Summer School	t.BA.WV.FTL-EN.19HS	4	During the summer semester break

### Options from other Engineering Programs

Bionics	t.BA.WVK.BION-EN.20HS	2	Fall
Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		28	

### Context modules

German for Beginners		2	Fall
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Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		6	

# Computer Science

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Cloud Computing 1	t.BA.WV.CCP1-EN.19HS	4	Fall	5. Semester
Software and System Security 1	t.BA.WV.SWS1-EN.19HS	4	Fall	5. Semester
Artificial Intelligence 1 Starts at KW 47	t.BA.WV.KI1.19HS	4	Fall	5. Semester
Internet of Things 1	t.BA.WV.IOT1-EN.19HS	4	Fall	5. Semester
Communication Networks and Services 1	t.BA.WV.CNS1-EN.19HS	4	Fall	5. Semester
Scientific Computing	t.BA.WV.SCC-EN.19HS	4	Fall	5. Semester
Project Thesis: Computer Science	t.BA.IT.PA-EN.19HS	6	Fall	5. Semester
System on Chip Design	t.BA.WV.SCD-EN.19HS	4	Fall	5. Semester
Serverless and Cloud Application Development	t.BA.WV.SCAD-EN.20HS	4	Fall	5. Semester
Digital Image Processing 1	t.BA.WV.DIP-EN.19HS	4	Fall	5. Semester
<i>Total Credits</i>		46		

## Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		28	

## Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		6	

# Mechanical Engineering

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Thermodynamics	t.BA.XX.FTH2-EN.19HS	4	Fall	3. Semester
Mechanical Vibrations	t.BA.MT.MDYN-EN.19HS	4	Fall	5. Semester
Smart Products and Production 1	t.BA.WV.SPP1-EN.19HS	4	Fall	5. Semester
Systems and Automation Technology 1	t.BA.WV.SYAT1-EN.19HS	4	Fall	5. Semester
Numerical and Experimental Aerodynamics	t.BA.WV.NEA-EN.19HS	4	Fall	5. Semester
Additive Manufacturing (3D printing)	t.BA.WV.AFV-EN.19HS	4	Fall	5. Semester
Project Thesis: Mechanical Engineering	t.BA.MT.PA-EN.19HS	6	Fall	5. Semester
Measurement and Control Systems 1	t.BA.MT.MRT1-EN.19HS	2	Fall	3. Semester
Electronics Project 1	t.BA.ET.PM3-EN.19HS	4	Fall	3. Semester
Industrial Design: Basic Principles	t.BA.WV.INDE-EN.19HS	4	Fall	5. Semester
<i>Total Credits</i>		<i>40</i>		

## Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		<i>28</i>	

## Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		<i>6</i>	

# Engineering and Management

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Financial Enterprise Modeling	t.BA.WI.FUM-EN.19HS	4	Fall	3. Semester
Probability and Statistics 3	t.BA.WI.WAST3-EN.19HS	4	Fall	3. Semester
Physics 3: Factory Physics	t.BA.WIP.FAP-EN.19HS	4	Fall	3. Semester
Project Thesis: Engineering and Management	t.BA.WI.PA-EN.19HS	6	Fall	5. Semester
Advanced Regression Modelling	t.BA.WV.ARM-EN.19HS	4	Fall	5. Semester
Databases	t.BA.WV.DB-EN.19HS	4	Fall	5. Semester
Service Engineering Basics	t.BA.WV.SEG-EN.19HS	4	Fall	5. Semester
Simulation of Business Processes	t.BA.WV.SIM-EN.19HS	4	Fall	5. Semester
<i>Total Credits</i>		<b>34</b>		

### Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		<b>28</b>	

### Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		<b>6</b>	

# System Engineering

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
System on Chip Design	t.BA.WV.SCD-EN.19HS	4	Fall	5. Semester
Product Development for Systems Engineering 3	t.BA.ST.PM3-EN.19HS	4	Fall	3. Semester
Sensors	Sen-EN 4	4	Fall	5 Semester
Computer Engineering 1	t.BA.XX.CT1-EN.13HS	4	Fall	3. Semester
Signals and Systems 1	t.BA.XX.SISY1-EN.13HS	4	Fall	3. Semester
Automation 1	t.BA.WV.AUT1-EN.19HS	4	Fall	5. Semester
Industrial Design: Basic Principles	t.BA.WV.INDE-EN.19HS	4	Fall	5. Semester
Digital Image Processing 1	t.BA.WV.DIP-EN.19HS	4	Fall	5. Semester
Project Thesis: Systems Engineering	t.BA.ST.PA-EN.19HS	6	Fall	5. Semester
Additive Manufacturing (3D printing)	t.BA.WV.AFV-EN.19HS	4	Fall	5. Semester
Mechanical Vibrations	t.BA.MT.MDYN-EN.19HS	4	Fall	5. Semester
<i>Total Credits</i>		46		

### Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		28	

### Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		6	

# Electrical Engineering

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Digital Image Processing 1	t.BA.WV.DIP-EN.19HS	4	Fall	5. Semester
Internet of Things 1	t.BA.WV.IOT1-EN.19HS	4	Fall	5. Semester
System on Chip Design	t.BA.WV.SCD-EN.19HS	4	Fall	5. Semester
Project Thesis: Electrical Engineering	t.BA.ET.PA-EN.19HS	6	Fall	5. Semester
Communication Networks and Services 1	t.BA.WV.CNS1-EN.19HS	4	Fall	5. Semester
Automation 1	t.BA.WV.AUT1-EN.19HS	4	Fall	5. Semester
Electronics Project 1	t.BA.ET.PM3-EN.19HS	4	Fall	3. Semester
Computer Engineering 1	t.BA.XX.CT1-EN.13HS	4	Fall	3. Semester
Signals and Systems 1	t.BA.XX.SISY1-EN.13HS	4	Fall	3. Semester
Sensors	Sen-EN 4	4	Fall	5 Semester
<i>Total Credits</i>		42		

## Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		28	

## Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		6	

# Energy and Environmental Engineering

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Project Thesis: Energy and Environmental Engineering	t.BA.EU.PA-EN.19HS	6	Fall	5. and 6. Semester
<i>Total Credits</i>		6		

### Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		28	

### Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		6	



# Transport Systems

## Modules in English for Bachelor Exchange Students Fall Semester Study year 2021-2022

Modules / Courses	Module Code	ECTS Credits	Term	Level
Project Thesis: Transport systems	t.BA.EU.PA-EN.19HS	6	Fall	5. and 6. Semester
<i>Total Credits</i>		6		

### Options from other Engineering Programs

Digital Assistive Technologies	t.BA.WM.DAST-EN.19HS	4	Fall
Digital Health	t.BA.WM.DHEAL-EN.19HS	4	Fall
Introduction to Computer and Communication Security	t.BA.WM.INCSEC-EN.19HS	4	Fall
International Management - Asia	t.BA.WM.INTMAN-EN.19HS	4	Fall
Principles and Applications of the IoT	t.BA.WM.PRIAP-EN.19HS	4	Fall
Rapid Software Prototyping for Engineering Science	t.BA.WM.RASOP-EN.19HS	4	Fall
Safety and Systems Engineering	t.BA.WM.SASEN-EN.19HS	4	Fall
<i>Total Credits from other Programs</i>		28	

### Context modules

German for Beginners		2	Fall
Introductions to Swiss Society and Politics		2	Fall
Intercultural Communication and Management	t.BA.XXK.ICAM-EN.19HS	2	Fall
<i>Total Context Modules</i>		6	