Taught-in-English courses for international students (undergraduate level)
at the Lucerne School of Computer Science & Information Technology

Computer Science & Information Technology
Business
Interdisciplinary course
Language / Communication

HSLU Lucerne University of Applied Sciences and Arts

Visiting and exchange students can choose from all courses listed below. Detailed descriptions can be found on our internal student platform (MyCampus) as soon as you are registered at the Lucerne School of Computer Science and Information Technology (latest 2 months prior arrival).
List is subject to changes until the start of the semester. Questions? Please contact the Interational Office (international.it@hslu.ch)!

Version January 2025

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall	I.BA_CONWB	**Computer Science & Information Technology**	**Computer & Network Basics**	Basic	3	1 Semester	yes	This module introduces you to architectures, models, protocols and network elements. You will set up simple local area networks (LANs). You will gain knowledge of IP addressing schemes and basic network security and you will be able to perform basic configurations for routers and switches. You will learn the following core skills: - Setting up simple LANs, performing basic configurations for routers and switches and implementing IPv4 and IPv6 addressing schemes. Configuring routers, switches and endpoints to provide access to local and remote network resources and establish end-to-end connectivity between remote devices. Configuration and troubleshooting in a small network.	none	School of Computer Science & Information Technology (IIM), Werner Odermatt	Rotkreuz
Fall	I.BA_PROFU	**Computer Science & Information Technology**	**Programming Fundamentals**	Basic	6	1 Semester	yes	Students learn both the basic programming concepts and the essential language concepts of the programming language JAVA. Furthermore, students learn basics of object-oriented programming (classes, objects, collections, inheritance). Students are able to analyze simpler problems and develop problem-oriented solutions including implementation. Abstraction and modelling of real-world problems are the high-level skills acquired in this course. A week before the regular semester starts, a "programming bootcamp" (intensive week) is offered and participation is highly recommended in order to successfully complete the course.	Without basic knowledge in programming the participation in programming bootcamp highly recommended (see description)	School of Computer Science & Information Technology (IIM), Halldór Janetzko	Rotkreuz
Fall	I.BA_BLOCC	**Computer Science & Information Technology**	**Blockchain**	Basic	3	1 Semester	no	Engineering and applied introduction to blockchain technology. Students are given a theoretical overview of the underlying technology and learn, in several iterations, how secure blockchain applications can be built. They then apply the acquired skills and knowledge in a practical project. The mode of assessment is through the project result (during contact study period).	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Alexander Denzler	Rotkreuz
Fall	I.BA_STCSB	**Computer Science & Information Technology**	**Statistics for Computer Science Basic**	Basic	3	1 Semester	yes	The students learn how to summarize and graphically represent data. They know different measures of central tendency and variation and when to use which measure. The students can calculate and interpret relationships between two sets of data.	none	School of Computer Science & Information Technology (IIM), Shaelom Fischer	Rotkreuz
Fall	I.BA_GAMEDES_MM	**Computer Science & Information Technology**	**Game Design**	Basic	3	1 Semester	no	Design of games regarding mechanics and player experiences. Introduction to concepts like challenge, balance, chance, flow, level, design, and narration. Analysis of games with theoretical frameworks. Development of game prototypes with different tools (analogue and digital).	none	School of Computer Science & Information Technology (INF), Reto Spörri	Rotkreuz
Fall	I.BA_OOPCREA	**Computer Science & Information Technology**	**Object-oriented Programming for Creative Tech**	Basic	6	1 Semester	yes	In this module you will receive a profound, yet practise-focused introduction into the basics of object-oriented programming using the example of C# and direct application within the game engine "Unity". Through a host of practise exercises and examples, you are given the skills to develop simple programs. The application of selected design principles as well as the use of professional development tools complete the course content.	none	School of Computer Science & Information Technology (IMTEC), Nathaly Tschanz / Lazlo Arato	Rotkreuz
Fall	I.BA_INTROIMMTECH	**Computer Science & Information Technology**	**Introduction to Immersive Technologies**	Basic	3	1 Semester	yes (oral exam)	In this module, you will receive a solid introduction to immersive technologies. You will learn about their characteristics and the effect they can have on human beings. You will learn about different fields of applications and concrete use cases of the wide-ranging spectrum (AR, VR, MR, serious/applied games and other immersive media productions), you will get an overview of the development history and the current technology state (platforms, ecosystems, etc.). You will try out, compare and evaluate a wide range of hardware and software applications yourself.	none	School of Computer Science & Information Technology (IMTEC), Markus Zank	Rotkreuz
Fall	I.BA_TECHPM	**Computer Science & Information Technology**	**Tech-driven Project Management**	Basic	3	1 Semester	no	In this module, you will acquire a solid foundation in technology and project management. The integration of ICT tools and concepts throughout the course ensures a holistic understanding of their application in project environments. Practical applications and real-life scenarios form a central focus for enhanced learning. Based on your acquired knowledge, you will complete an assignment on a practical use case.	none	School of Computer Science & Information Technology (IMTEC), Chen-Da Liu Zhang	Rotkreuz
Fall	I.BA_MATHSIMTEC	**Computer Science & Information Technology**	**Mathematics for Immersive Tech**	Basic	3	1 Semester	yes	You will receive a comprehensive introduction to mathematical foundations and concepts, linear algebra and analysis with practical applications in immersive technologies, which serve as a basis for understanding more advanced concepts of higher mathematics. Through practical exercises and projects, you will learn where mathematical concepts are applied in immersive technologies - illustrated by concrete real-world examples.	none	School of Computer Science & Information Technology (IMTEC), Antonio Russo	Rotkreuz
Fall	I.BA_GAMEPROD	**Computer Science & Information Technology**	**Introduction to Game Production**	Basic	3	1 Semester	no	In this module, you will be introduced to foundational concepts and processes that are commonly used in computer game production. You will be introduced to visual tools used in game engines and on the use of them to create interactive experiences. You will get familiar with general elements of a game engine and their visual tools – ranging from UI builder to camera management and animation systems, to simple shaders and VFX with a particular focus on visual scripting.	none	School of Computer Science & Information Technology (IMTEC), Thomas André	Rotkreuz
Fall	I.BA_3DMOD4RT_MM	**Computer Science & Information Technology**	**3D Modelling for Real-Time Applications**	Basic	3	1 Semester	yes	3D-modeling is ubiquitous in digital media and we often encounter it unconsciously in everyday life. The range of applications is huge: films, games, apps, architecture, design, medicine, advertising, etc. This module provides an overview of available technologies, tools, workflows and teaches the technical foundations for asset creation (models, textures etc.). You will learn basics of lighting and texturing as well as simple rigging and animation workflows. You will test and implement the imparted knowledge in practical exercises . After completion, you will be able to use industry standard export pipelines to integrate your created assets into projects in a game engine.	none	School of Computer Science & Information Technology (IMTEC), Markus Zank	Rotkreuz
Fall	I.BA_STDW	**Computer Science & Information Technology**	**Digital Transformation for Sustainability**	Basic	3	1 Semester	no	This module focuses on the role of digital transformation for sustainable development and the application of technological solutions across various economic sectors. It explores common social and environmental challenges and explains how digital transformation can address these issues. The module covers key concepts such as systems thinking, circular economy, life cycle analysis, and general business management processes in context of digital transformation for sustainability. Case studies from Switzerland and international sources are used to illustrate how sustainability goals can be achieved and accelerated through digital solutions. Students will develop critical thinking and analytical skills relevant to implementing solutions to sustainability issues using digital tools.	none	School of Computer Science & Information Technology (WI), Julianna Priskin	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall	I.BA_ARINT	**Computer Science & Information Technology**	**Introduction to Artificial Intelligence**	Intermediate	6	1 Semester	no	This Module is a broad introduction to the history and state-of the art of Artificial Intelligence and its applications in search, classification, optimization, natural language processing, vision systems, etc. The course includes key underlying AI technologies such as supervised/unsupervised machine learning and neural networks. It also includes a strong focus on the practical application of AI in business including case-studies.	Linear Algebra, Applied Statistics, and Python Programming. While not compulsory, students who took modules on these topics prior to ARINT will find the material more accessible.	School of Computer Science & Information Technology (IIM), Javier Montoya	Rotkreuz
Fall	I.BA_BCHAIN	**Computer Science & Information Technology**	**Blockchain**	Intermediate	6	1 Semester	no	Engineering and applied introduction to blockchain technology. Students are given a theoretical overview ofthe underlying technology and learn, in several iterations, how secure blockchain applications can be built.They then apply the acquired skills and knowledge in a practical project.	Assessment stage (first year) passed, knowledge in object-oriented programming, programming skills (JAVA), programming for data science	School of Computer Science & Information Technology (INF), Alexander Denzler	Rotkreuz
Fall	I.BA_ISPTM	**Computer Science & Information Technology**	**International Standards for programmers and technical managers**	Intermediate	3	1 Semester	no	International Standards play a crucial role in IT, without which the global technological infrastructures that we depend on daily would not be possible. Standards establish formal guidelines for the technical interaction of hardware, software and network components in addition to enabling telecommunications and training. This module gives an introduction to the world of standards by presenting an overview of important standards in Computer Science and examining in detail open International Standards relating to Knowledge Tokens and blockchain in the education sector as defined by the Knowledge Foundation standards organization. In this context, the students will also be introduced to - and work directly in - the standardization process.	none	School of Computer Science & Information Technology (WI), Aaron Walsh	Rotkreuz
Fall	I.BA_GAME_MM	**Computer Science & Information Technology**	**Game Theory**	Intermediate	3	1 Semester	yes	In this module we will explore the foundations of game theoretical description of conflicts and mathematical models that are used to resolve them, meaning finding the optimal strategy accounting for opponents' responses. We will explore simultaneous, repeated and dynamic games and discuss the most prominent game-theoretical concepts (such as rationality, best responses, optimal strategy, Nash equilibrium, sub-game perfection, game-theoretic values) and their applications within classical toy-examples and real-world cases.	Assessment stage (first year) passed, knowledge in Linear Algebra, Statistics and Analysis required	School of Computer Science & Information Technology (AIML), Caro Gregoire	Rotkreuz
Fall	I.BA_DIGCRE	**Computer Science & Information Technology**	**AI Generated Art & Digital Creativity**	Intermediate	3	1 Semester	no	Explore different techniques of Machine Learning / Artificial Intelligence used today and their applications for design and art. Create neural networks and experiments with code examples. Investigate methods used in Computer Vision (image classification, objects detection, pose estimation...) and Generative Deep Learning (DL). Explorative module with a final project (solo or in group) based on one of the main DL-models or some variations of it. Of particular interest to developers (Python + JS), but can be suitable for anyone with programming skills and eager to learn.	one year of IT studies completed	School of Computer Science & Information Technology (AIML), Guillaume Massol	Rotkreuz
Fall	I.BA_DSPRO1	**Computer Science & Information Technology**	**Data Science Project 1**	Intermediate	6	1 Semester	no	This course equips students to build comprehensive data science and machine learning solutions. Initially, students select a project to focus on and then proceed to create an end-to-end solution. The educational approach blends lectures with individual coaching, enabling students to acquire industry-relevant skills. Topics range from data science fundamentals to model validation, managing skewed datasets, crafting scientific presentations, and basics of data engineering, among others. The teaching team includes technical lecturers and communication experts, providing support in both domains. The culmination of the course is the submission of projects to a panel from industry giants like Google, NVIDIA, and Thomson Reuters, which influences the final assessment. This module can be combined with DSPRO2 in Spring if you stay for the whole academic year.	Assessment stage (first year) passed, intermediate knowledge of Python and Data Science is required for successful completion of the module. No advanced knowledge of machine learning is expected.	School of Computer Science & Information Technology (AIML), Umberto Michelucci	Rotkreuz
Fall	I.BA_TIME	**Computer Science & Information Technology**	**Time Series Analysis**	Intermediate	3	1 Semester	yes	This module introduces students to the fundamental and advanced techniques of time series analysis, covering time domain methods, frequency domain methods, and machine learning/deep learning approaches. Through hands-on exercises and real-world datasets from various sectors like finance, weather, and biomedical fields, students will learn to forecast, detect anomalies, and classify time series data.	Basic statistics and probability theory, Python programming	School of Computer Science & Information Technology (AIML), Ludovic Amruthalingam	Rotkreuz
Fall	I.BA_AMLMED_MM	**Computer Science & Information Technology**	**Applications of Machine Learning in Medicine**	Intermediate	3	**Intensive week - early registration!** 01.09.2025 - 05.09.2025 (dates tbc)	no	The module is divided in three parts associated to different datasets related to medicine. For each dataset, analyses are carried out to generate understanding and machine-learning tasks are formulated to identify technological potential. The focus will be on issues that are typical of medical data such as domain-specific feature engineering, generalization across cohorts, annotation issues, interpretability, privacy, and skewed, biased or imbalanced data.	Knowledge in machine learning. **Early registration until 31.05.2025!**	School of Computer Science & Information Technology (AIML), Simone Lionetti	Rotkreuz
Fall	I.BA_SUM_SCHOOL	**Computer Science & Information Technology**	**International Summer School on Designing Serious Games**	Intermediate	3	**Intensive week - early registration!** August 2025 (dates tbc)	no	The goals of serious games go beyond pure entertainment. They are about learning, education or awareness raising. This two-weeks intensive course explores different game genres and their typical game mechanics and investigates their suitability for different serious use cases. Each day, after a short theoretical input, you will form teams to develop paper prototypes for a specific scenario. This will enhance your game design skills and allow you to gain new insights into different game mechanics by building and testing game prototypes with simple materials without being distracted by technology. More information online: https://www.hslu.ch/en/lucerne-school-of-information-technology/international/summer-school/designing-serious-games/	Experience in the field of game design (e.g. a module at university level). Students who have no previous experience will be given a preparatory assignment. **Early registration!**	School of Computer Science and Information Technology (INF), Reto Spörri	Rotkreuz
Fall	TA.BA_PDP1	**Computer Science & Information Technology**	**Engineering Product Development Project 1**	Intermediate	6	1 Semester	no	Engineering project: experiencing the development of a product in an interdisciplinary team. Elaboration of market and product requirements; develop, evaluate and verify engineering solution concepts taking into account established ideas- and solution-finding methods. Set-up of suitable basic tests and prototypes for the proof of concept.	Admission for exchange to this module has to be checked individually with the responsible lecturer	School of Engineering and Architecture, Simon Züst	Horw
Fall	TA.BA_PHYSIKS2A	**Computer Science & Information Technology**	**Physics 2A**	Intermediate	3	1 Semester	yes	The basics of thermodynamics, oscillations and waves are studied. Main topics are the ideal gas, the first and second law of thermodynamics, cyclic processes in the pV diagram, as well as the thermodynamic efficiency. Harmonic, damped and driven oscillations are investigated. The study of harmonic waves, especially sound waves complete the semester.	Basic Mathematics Theory, knowledge of Physics according to Physics 1A	School of Engineering and Architecture, Philipp Schütz	Horw

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall	I.BA_SIOT	**Computer Science & Information Technology**	**Secure IOT**	Advanced	3	1 Semester	yes (oral exam)	Secure Internet of Things (SIOT)" course covers knowledge in building secure IoT systems, technologies, and real-world applications. In this hands-on course, students will gain practical experience with IoT prototypes using popular IoT platforms, security technologies and testing tools, secure IoT devices. They will conduct end-to-end security attacks and assessments to IoT systems to demonstrate vulnerabilities. Practical knowledge and understanding leads to the ability to recommend thread mitigation measures to minimize the risk in IoT solutions and networks. This course is targeted at students who are already familiar with basics on systems programming, networking fundamentals and wish to dive into the IoT end-to-end security aspects towards technologies that transform businesses and peoples' lives.	Networking fundamentals, basics on systems programming, familiarity with C programming, debugging, Linux command line, shell scripts, basic crypto protocols.	School of Computer Science & Information Technology (ICS), Angela Nicoara	Rotkreuz
Fall	I.BA_INLP	**Computer Science & Information Technology**	**Introduction to Natural Language Processing**	Advanced	3	1 Semester	no	The module introduces students to Natural Language Processing. It starts with the basics of Language and the common tasks in NLP pipeline. It then gently makes students acquainted with the statistical approaches and vector models. Subsequently, the Neural Network-based approaches are introduced, starting from the origina Word2Vec, till some recent advanced methods, considering also their advantages and limits. The second part is more practical, and the presented idea are applied to demonstrative cases and tasks in NLP.	Assessment stage (first year) passed	School of Computer Science & Information Technology (INF), Luca Mazzola	Rotkreuz
Fall	I.BA_USAB	**Computer Science & Information Technology**	**Usability**	Advanced	3	1 Semester	no	The human being in direct interaction with systems, definitions of usability and user experience, human centred design process and its integration into a general project approach, GUI design, various interaction elements, usability and quality, usability and accessibility, usability and special technologies (e.g. AR/VR, hardware ...).	Computer Science Fundamentals, Programming Skills	School of Computer Science & Information Technology (INF), Armin Egli	Horw (!)
Fall	I.BA_HFD_MM	**Computer Science & Information Technology**	**Human Factors & Design**	Basic	3	1 Semester	yes	The module's goal is to attain greater familiarity with the human "system" to allow for a deeper understanding of why users of interactive systems behave in a certain way. Gestalt laws of grouping are taught and discussed, as are the key human anatomical and physiological aspects, up to and including psychological areas such as motivation, emotions and stress.	None	School of Computer Science & Information Technology (INF), Marcel Uhr	Rotkreuz
Fall	I.BA_MLOPS	**Computer Science & Information Technology**	**Machine Learning Operations**	Advanced	3	1 Semester	no	Machine learning operations (MLOps) is a set of techniques and best practices at the intersection of Machine Learning, DevOps, and Data Engineering. Its goal is to develop ML systems that are reliable, scalable, reproducible, and can be deployed into production with minimal manual overhead. This course also teaches best practices for training deep neural networks, as well as distributed training (single model on multiple GPUs).	Students should be proficient in Python and at least one ML framework (PyTorch, TensorFlow).	School of Computer Science & Information Technology (AIML), Andreas Marfurt	Rotkreuz
Fall (tbc if it takes place in Fall 2025)	I.BA_EPRE	**Computer Science & Information Technology**	**Responsible AI Entrepreneurship & Innovation**	Advanced	3	1 Semester	no	This module is about learning from StartUps. Newly founded companies are known for being agile and bringing innovations to the market that can change existing structures. The Lean StartUp and Design Sprints Quarter approaches are applied to an innovation project. It is examined how AI/ML can be used in products/services that contribute to a sustainable society. This means that solutions with AI are developed in teams that meet the needs of a sustainable society and the users. Specifically, it is about the development of a mobile, intelligent application as a minimally functioning product (MVP) with the help of an Open Source Framework for mobile Apps. The module may be conducted in cooperation with another University. Then, mixed teams of both universities work together remotely. **Exceptionally, this module is NOT running in Fall 2024!**	Assessment stage (first year) passed	School of Computer Science & Information Technology (AIML), Christine Larbig	Rotkreuz
Fall (tbc if it takes place in Fall 2025)	I.BA_SPDS	**Computer Science & Information Technology**	**Sports Data Science**	Advanced	3	1 Semester	no	This module is treating different aspects of Sports Data Science and consists of three domains. In the theory part, the background and history as well as the most common machine learning and computer vision methods for sports are discussed. In the Application block this knowledge is then directly applied to, if available, relevant Swiss sport datasets. During the transfer parts, we will look at the sports expert side, and discuss subjects such as data acquisition and collaboration with non data scientists. Additionally it is taught how analysis results can be presented convincingly and impactfully to sport experts.	Knowledge in Machine Learning	School of Computer Science & Information Technology (AIML), Solange Emmenegger	Rotkreuz
Fall (tbc if it takes place in Fall 2025)	I.BA_XAI	**Computer Science & Information Technology**	**Explainable AI**	Advanced	3	1 Semester	no	In a world where AI is increasingly prevalent, understanding and addressing the challenges of its opaque nature is vital. This course equips students with the knowledge and skills needed to create AI models that are transparent, interpretable, and responsible. It covers theoretical foundations, practical methods, real-world applications, and ethical considerations of XAI. Students will acquire an understanding of the algorithms, methodologies, and tools used to create AI systems that can provide explanations for their decision-making processes.	Assessment stage (first year) passed, general knowledge of AI, machine learning (ML), and Python programing language. While this course has no strict prerequisites, a basic understanding of machine learning concepts and programming skills (preferably Python) would be beneficial. Familiarity with algorithms, statistics, and ethics would also be advantageous.	School of Computer Science & Information Technology (AIML), Luis Terán	Rotkreuz
Fall + Spring	I.BA_PHKI	**Computer Science & Information Technology**	**Philosophy, Art and Artificial Intelligence**	Basic	3	1 Semester	no	This interdisciplinary course delves into the fascinating intersection of philosophy, art, and artificial intelligence, offering a unique exploration of its complexities and implications. Students will explore key themes such as philosophical approaches to AI and art, what it means to be an artist in AI era, how AI is portrayed in the media, and the implications of AI, all while gaining a deep understanding of how these concepts are intertwined and what it says about society. Students will expand their perspectives on the philosophical nature and societal impact of AI, gaining invaluable insights into the future of this rapidly evolving field.	none	School of Computer Science & Information Technology (AIML), Shaelom Fischer	Rotkreuz
Fall + Spring	I.BA_KRR_MM	**Computer Science & Information Technology**	**Knowledge Representation & Reasoning**	Intermediate	3	1 Semester	yes	This module introduces students to the fundamentals of knowledge representation in AI. Propositional logic, predicate logic, description logics, and Baysian networks are taught with the goal that students understand and can apply relevant AI technologies such as logical modeling, bayesian networks, ontologies, knowledge graphs, and SAT solvers. Technical vocabulary will be taught in both English and German. Some material will be taught in German with English slides.	Basic knowledge of math and statistics	School of Computer Science & Information Technology (AIML), Jana Koehler	Rotkreuz
Fall + Spring	I.BA_DVIZ_MM	**Computer Science & Information Technology**	**Data Visualisation for AI and Machine Learning**	Intermediate	3	1 Semester	no	Principles and concepts for the visual presentation of information. Design strategies for methods of presentation. Histories, theories and best practice for compelling data visualizations. Hands-on project work and case studies in applied data visualization. Independent assessment of design decisions concerning human perception and the significance of the visualization. Interactive visualizations.	Basic knowledge in Artificial Intelligence, Machine Learning and programming for Data Science	School of Computer Science and Information Technology (AIML), Teresa Maria Kubacka	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall + Spring	I.BA_ML_MM	**Computer Science & Information Technology**	**Machine Learning**	Intermediate	3	1 Semester	yes	Fundamental techniques, models and architectures for supervised and unsupervised learning targeted to structured and unstructured data: regression and classification models, clustering, market basket analysis, recommender systems. Introduction to deep learning with applications to image and text analysis. Students can take either ML_MM (3 credits) or ADML (6 credits), but not both.	Students are expected to have already studied math and programming and to be strong at both subjects - further details when interested pls get in touch	School of Computer Science & Information Technology (AIML), Marc Pouly	Rotkreuz
Fall + Spring	I.BA_ADML_MM	**Computer Science & Information Technology**	**Advanced Machine Learning**	Intermediate	6	1 Semester	yes	Fundamental techniques, methods and architectures for supervised and unsupervised machine learning targeted to structures and unstructured data. Introduction to deep learning and application to image and text analysis. More advanced topics include generative models, transfer learning & unsupervised pre-training. Students can take either ML_MM (3 credits) or ADML (6 credits), but not both.	Students are expected to have already studied math and programming and to be strong at both subjects - further details when interested pls get in touch	School of Computer Science & Information Technology (AIML), Marc Pouly	Rotkreuz
Fall + Spring	I.BA_AICASE	**Computer Science & Information Technology**	**AI Case Studies**	Intermediate	3	1 Semester	no	This module will consist of a series of lectures led by an AI entrepreneur with guest co-lecturers from a variety of industries (services to product), stages (small and large), and countries (near and far). Each week students will dive deep into the real-world challenges and opportunities of deploying AI systems in organizations. This is a highly interactive module, with a lot of engagement and debate required. The goal of each weekly session is for teams to develop and present a workable plan to use AI to create value for the organization. Students will be challenged to think on their feet, question everything and engage in critical thinking to create value.	Assessment stage (first year) passed and knowledge in algorithmic business	School of Computer Science & Information Technology (AIML), Donnacha Daly	Rotkreuz
Fall + Spring	I.BA_DASB	**Computer Science & Information Technology**	**Data Science Basics**	Intermediate	3	1 Semester	yes	This module is carried out within the framework of the Major Data Engineering and Data Science. It provides a systematic introduction to the fundamentals of data engineering and data science through an introduction to data analysis with the programming language R.	Knowledge about data management, database systems	School of Computer Science & Information Technology (WI), Luca Mazzola	Rotkreuz
Fall + Spring	I.BA_I2C	**Computer Science & Information Technology**	**Introduction to C Programming Language**	Intermediate	3	1 Semester	yes	Students develop knowledge and practical skills in programming using C, and the application of C in real world programing scenarios. Topics include basics & introduction to C, Control Flow & statements, Functions, variable scope, Arrays & Strings, Pointers & memory addressing, Structure, union & dynamic memory allocation. C is a general-purpose programming language and it is very popular despite being old. C is strongly associated with UNIX, as it was developed to write the UNIX operating system, hence giving students a strong base to associate their knowledge in future easily with machine language and its programming. The main features include low-level memory access, a simple set of keywords, and a clean style, these features make C language suitable for system programming. This module uses global best resources for online teaching. Students are free when they work. But the task must be accomplished by the end of the semester.	Basic knowledge of one or more other programming languages	School of Computer Science & Information Technology (ICS), Aakanksha Tiwari	Rotkreuz
Fall + Spring	I.BA_CLOUDSEC_MM	**Computer Science & Information Technology**	**Cloud Security**	Intermediate	3	1 Semester	yes	Cloud Computing is the new way of computing by today, and cloud security is an essential prerequisite and enabler for successful cloud operations. In addition, control and compliance aspects need to be addressed to provide the right environment within which organisations can use cloud. This module provides an overview of technical cloud security elements & introduces cloud relevant compliance frameworks. Please note, the teaching material is completely in English, but the official class will be partly held in German (technical part in English, management part in German). For our incoming international students the teacher of the management part offers separate workshops in English (around 3 x 2.5 hours) in order to make sure the content of the course is understood. The written exam will be given in English too.	Assessment stage (first year) passed	School of Computer Science & Information Technology (ICS), Sami Hassanein	Rotkreuz
Fall + Spring	Fall: I.BA_IOT Spring: I.BA_INTOT	**Computer Science & Information Technology**	**Internet of Things**	Fall: Intermediate Spring: Basic	3	1 Semester	yes (oral exam)	“Internet of Things" (IOT) course covers fundamental knowledge in building IoT systems, technologies, and real-world applications, and delivers hands-on skills for working in the IoT systems and software domain. Fundamental, practical knowledge and understanding leads to the ability to design and build real-world IoT systems and applications in industry. Additionally, a broad introduction to IoT empowers students for their future jobs and helps them pursuing a career as a Computer Science professional. This course provides a practical introduction to Internet of Things (IoT). In this hands-on course, students will develop knowledge and practical skills in the design, programming, and building IoT systems and technologies, as well as applying concepts learned in class to actual real-word IoT applications. Topics include: IoT concepts, technologies, system software architectures for IoT, IoT challenges, IoT cloud-backend platforms overview, latest popular IoT devices, boards, sensors & tools, IoT connectivity & networking, IoT protocols & cloudbased interfaces, IoT security, visual programming for IoT (Node-RED). The course will also cover real-world use cases from different industries.	**Fall:** Familiarity with C programming, Linux command line, shell scripts, networking fundamentals. **Spring:** none	School of Computer Science & Information Technology (INF / IIM), Angela Nicoara	Rotkreuz
Fall + Spring	I.BA_ETHAI	**Computer Science & Information Technology**	**Ethics, Regulation and AI**	Advanced	3	1 Semester	no	The developments in the field of artificial intelligence and the digital transformation lead to diverse ethical and normative questions. The module will introduce these discussions and clarify the ethical foundations so that these current debates can be understood and related to one's own work. The social and normative aspects of AI will be addressed and the most important considerations on the ethics of AI will be controversially debated. Ethics will also be applied practically within the framework of an ethical reflection on one's own project.	Assessment stage (first year) passed	School of Computer Science & Information Technology (AIML), Sita Mazumder	Rotkreuz
Fall + Spring	I.BA_NLP	**Computer Science & Information Technology**	**Natural Language Processing**	Advanced	9	1 Semester	yes	Natural language processing (NLP) is a subfield of linguistics, computer science, and AI concerned with the interactions between computers and human language, in particular how to program computers to process and analyse large amounts of natural language data. We cover text-processing, semantics analysis, sentiment analysis, document classification and chatbots, as well as the latest deep learning methods for NLP.	Advanced Machine Learning	School of Computer Science & Information Technology (AIML), Andreas Marfurt	Rotkreuz
Fall + Spring	I.BA_AICOMP	**Computer Science & Information Technology**	**AI Competition**	Advanced	6	1 Semester	no	In this module, students participate in national and international AI Challenges and compete against other universities or organizations. Significant prize money is sometimes (but not always) at stake. Students will be supported to be ambitious and win these competitions. The challenges are, for example, competitions from Kaggle or RoboCup, or relevant Hackathons.	Intermediate knowledge in Data bases, big data, data visualization, machine learning	School of Computer Science & Information Technology (AIML), Aygul Zagidullina	Rotkreuz
Spring	I.BA_MATCS	**Computer Science & Information Technology**	**Mathematics for Computer Science**	Basic	3	1 Semester	yes	Students know different functions and how the graphs of these functions look. They can differentiate and integrate these functions and interpret the results. They can apply mathematical concepts to business and finance.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Aygul Zagidullina	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Spring	I.BA_BUSOD	**Computer Science & Information Technology**	**Software Development**	Basic	3	1 Semester	yes	The module covers the most important software ingredients for business software. Students will deepen their knowledge about code quality and refactoring. As a next step the module will empower students to create graphical user interfaces. File handling and networking concepts will be taught as these are crucial ingredients for business applications. Implementing client-server architectures completes this module. The project phase in the last third of the course grants individual freedom exploring the graphical and interactive capabilities of JAVA.	none	School of Computer Science & Information Technology (IIM), Halldór Janetzko	Rotkreuz
Spring	I.BA_DAMGT	**Computer Science & Information Technology**	**Data Management**	Basic	3	1 Semester	yes	Data is considered the new oil, as it fuels our modern, tech-driven society. As such, it's crucial to understand what data actually is, how it can be transformed into information or knowledge and which data types exist. In afirst step, modelling, building and querying of relational databases is covered. The second step focuses on so-called NoSQL databases. Here, the focus will be applied on graph databases.	none	School of Computer Science & Information Technology (IIM), Alexander Denzler	Rotkreuz
Spring	I.BA_WECOT	**Computer Science & Information Technology**	**Web & Communication Technologies**	Basic	3	1 Semester	no	This module aims to provide students with the necessary knowledge on how to successfully build, design, populate with content and advertise an eCommerce solution. Theoretical inputs cover HTML, CSS, CMS, security, ePayment, online Stores, online revenue models, SEO and Web Analytics. The theoretical knowledge is applied within a project as part of a group work, with the aim of realizing a fully functional and secure eCommerce solution by end of the semester. All necessary steps are documented within a CANVAS, which serves as a "construction manual".	none	School of Computer Science & Information Technology (IIM), Martin Zimmermann	Rotkreuz
Spring	I.BA_INTEC	**Computer Science & Information Technology**	**Information Technology**	Basic	6	1 Semester	no	In this module, students apply knowledge from the WECOT and DAMGT modules by developing a complete system from business case to analysis, design, programming, and implementation strategies. This involves combining the concept of industry "platforms" and the concept of "business models". Students work in teams to develop a significant product. During the planning and implementation of the platform they are supported by the lecturers of the modules WECOT and DAMGT, from the second week onwards there is project-related coaching regarding this infrastructure by assistants.	If you don't have basic knowledge in web technologies, it's mandatory to also take the course I.BA_WECOT!	School of Computer Science & Information Technology (IIM), Dieter Arnold	Rotkreuz
Spring	I.BA_ADCREA	**Computer Science & Information Technology**	**Algorithms and data structures for creative tech**	Basic	3	1 Semester	yes	Students know and understand fundamental data structures and algorithm. They know how to assess them and select them as required. Students learn how to implement, test and apply fundamental datastructures and algorithms in C#. They know the basic concepts and architectures for multiuser applications and know how to use them. Students use and enlarge their C# programming knowledge.	Based on I.BA_OOPCREA, therefore students must have knowledge in object-oriented programming and Unity to follow.	School of Computer Science & Information Technology (IMTEC), Laszlo Arato	Rotkreuz
Spring	I.BA_COMPMATHS	**Computer Science & Information Technology**	**Computational Mathematics**	Basic	3	1 Semester	yes	This module provides a comprehensive introduction to computer-based mathematical analysis tailored specifically to the requirements of analysis. Students will be equipped to efficiently solve complex mathematical problems and develop solutions to address numerical challenges inherent in analysis. The curriculum covers fundamentals such derivation, as well as advanced topics including integration methods and optimization. Additionally, students will be prepared for the use of immersive technologies, enabling them to visualize mathematical models in virtual spaces and explore them interactively.	Based on I.BA_MATHSIMTEC, therefore students must have knowledge which is taught there in order to follow.	School of Computer Science & Information Technology (IMTEC), Antonio Russo	Rotkreuz
Spring	I.BA_LAB_HCD	**Computer Science & Information Technology**	**CreaLab Human-centered design**	Basic	6	1 Semester	no	In this module students learn about the human-centred design process, which aims to develop use-centred products. The focus is on the continuous involvement of users to ensure that the 'right product' is developed and that 'the product is done right'. - User research: Conducting user surveys and developing personas to understand the needs and behaviours of the target audience. - Prototyping: Iterative development from low-fi to high-fi prototypes. - UX testing: Regular testing with users to validate and improve prototypes.The aim is to enable students to design products that are functional, usable and tailored to the real needs of users.	none	School of Computer Science & Information Technology (IMTEC), Marcel Uhr	Rotkreuz
Spring	I.BA_LAB_INIS	**Computer Science & Information Technology**	**CreaLab Immersive narratives & interactive storytelling**	Basic	3	1 Semester	no	You will learn about fundamental storytelling elements, such as plot, character, genre, world-building, as well as storytelling approaches – in order to understand the components of effective and successful stories. You will first learn about these elements as applied across a wide range of media forms (cinema, animation, television, etc.). Close attention will be further paid to specific applications of interactive media, such as branching narrative paths, user interactivity, co-authorship, interface design etc. Examples and case studies are used to illustrate the operation of story elements in interactive media. You will develop an understanding of the notion of story, its components, and its principles in the creation process and develop own ideas, concepts and storyboards.	none	School of Computer Science & Information Technology (IMTEC), Nathaly Tschanz	Rotkreuz
Spring	TA.BA_LINALG_MM	**Computer Science & Information Technology**	**Linear Algebra**	Basic	3	1 Semester	yes	Basics of linear algebra, including matrix algebra and its applications, especially with regard to Euclidean space and linear transformations, as well as eigenvalues and eigenvectors; solution of mathematical problems using algebraic and numerical processes and their graphical representation, particularly when using numerical software such as MATLAB or Python.	Basic Mathematics Theory	School of Engineering and Architecture, Peter Scheiblechner	Horw
Spring	TA.BA_PHYSIK1A_MM	**Computer Science & Information Technology**	**Physics 1A**	Basic	3	1 Semester	yes	Basic mechanical theories are taught. Handling of the following topics: dynamics of the mass point based on Newton's laws, work, energy, impulse and their laws of conservation. Statics and motion of fluids: hydrostatic pressure, buoyancy, continuity equation, Bernoulli equation, flow resistance.	Basic Mathematics Theory	School of Engineering and Architecture, Sigrun Köster	Horw
Spring	TA.BA_MATH2A	**Computer Science & Information Technology**	**Mathematics 2A**	Basic	3	1 Semester	yes	Complex numbers: normal and polar forms, Euler's formula, roots of complex numbers. First order differential equations: basic definitions, Euler's method, method of separation of variables and method of variation of the constant. Second order differential equation: Different types of differential equations in particular linear equations, homogeneous and inhomogeneous. Several applications to real word problems, in particular to harmonic oscillations.	Basic Mathematics Theory	School of Engineering and Architecture, Jung Kyu Canci	Horw
Spring	I.BA_STCSA	**Computer Science & Information Technology**	**Statistics for Computer Science Advanced**	Intermediate	3	1 Semester	no	The students will learn about different probability distributions. They will be able to calculate and interpret estimates and test statistical hypothesis. Students will learn about the chi-square test and be able to analyse variance. Acquired knowledge will be applied in the statistics project.	Applied Statistics 1 or basic knowledge about statistics	School of Computer Science & Information Technology (IIM), Shaelom Fischer	Rotkreuz
Spring	I.BA_ERPAP	**Computer Science & Information Technology**	**ERP Systems - Concepts and Application**	Intermediate	3	1 Semester	no	Enterprise Resource Planning (ERP) Systems are IT-based information systems which closely integrate business data and business processes across a business as well as across multiple businesses. That kind of systems is nowadays used by many businesses, big and small and in different industries. IT and business are deeply interlinked and dependent of each other. Solid knowledge about ERP systems is indispensable for an IT professional.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Thomas Gysler	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Spring	I.BA_INFSC	**Computer Science & Information Technology**	**Information Security**	Intermediate	6	1 Semester	no	Students will receive an introduction and overview of the broad field of information- and cybersecurity. They will learn about the threat landscape, vulnerabilities, attack methods and the associated risks. They will receive an introduction to public key cryptography and methods to protect against cyber risks. They will also receive an introduction to penetration testing (ethical hacking). They will use the zero-entry hacking method to identify vulnerabilities in a system and penetrate the system. The course concludes with the presentation of the Penetration Test Report, which documents the vulnerabilities found and recommendations for closing them.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Philipp Toggweiler	Rotkreuz
Spring	I.BA_SWENG	**Computer Science & Information Technology**	**Software Engineering**	Intermediate	3	1 Semester	yes	The students get an introduction to the broad field of Software Engineering. The complete life cycle of a software system is covered, step-by-step, from inception to release.	Assessment stage (first year) passed, basic programming skills	School of Computer Science & Information Technology (IIM), Toggweiler Philipp	Rotkreuz
Spring	TA.BA_APC	**Computer Science & Information Technology**	**Applied Process Control**	Intermediate	3	1 Semester	yes	The concepts of systems and signals will be explained and characterized by means of Laplace transformation. Students will become familiar with feedback loops and will learn to design controllers that guarantee stability and performance. Laboratories will help to consolidate the acquired knowledge.	Basic Mathematics and Physics Theory	School of Engineering & Architecture, Armin Taghipour	Horw
Spring	TA.BA_PDP2	**Computer Science & Information Technology**	**Engineering Product Development Project 2**	Intermediate	6	1 Semester	no	Exemplary engineering learning project with processing of an interdisciplinary project task in a team. As a continuation of PDP1, partial solutions are brought together, the solution is realised and implemented, and the overall concept is tested. In parallel, presentations, visualisations and technical documentation of the results are created.	Entry requirement: TA.BA_PDP1 (in fall)	School of Engineering and Architecture, Simon Züst	Horw
Spring	I.BA_MEDIMG	**Computer Science & Information Technology**	**Medical Image Analysis**	Intermediate	3	1 Semester	yes	This course provides a comprehensive exploration on medical image processing and analysis techniques, focusing on the integration of artificial intelligence (AI) techniques in the medical imaging domain. The fundamentals of computational and mathematical methods in medical imaging will be explored. Through theoretical classes and practical exercises, students will gain a deep understanding on how deep learning techniques are used to process, identify, classify, and quantify patterns in medical images. By the end of the module, students will be equipped with the skills and knowledge necessary to tackle complex problems atthe intersection of digital health and AI.	Assessment stage (first year) passed, knowledge in (advanced) Machine Learning	School of Computer Science & Information Technology (AIML), Javier Montoya	Rotkreuz
Spring (will not take place in Spring 2025)	I .BA_AIHLTH	**Computer Science & Information Technology**	**Artificial Intelligence for Healthcare - Guest Lectures**	Intermediate	3	**Intensive week - early registration!** (dates for february 2026 tbc)	no	Introduction to applications of Artificial Intelligence in Healthcare starting from practical examples. This includes clinical diagnosis as well as the broader medical industry in contexts such as pharmacy, medical devices and remote care. Analysis of potential and challenges of Machine Learning in the domain of Healthcare.	Programming in Python and Machine Learning basics. **Early registration until 31.10.2025!**	School of Computer Science & Information Technology (AIML), Simone Lionetti	Rotkreuz
Spring (will not take place in Spring 2025)	I.BA_AISUS	**Computer Science & Information Technology**	**AI and Sustainability**	Intermediate	3	**Intensive week - early registration!** (dates for february 2026 tbc)	no	This block-week module looks at the intersection of Artificial Intelligence (AI) and Sustainability. There are four key topics covered during the week, with a focus on the latter two. [A] What is AI (brief intro)? [B] What is Sustainability (brief intro)? [C] How can AI technologies be used to improve sustainability? (with a focus on the 17 UN Sustainability Goals (SDGs)). [D] Are AI technologies themselves Sustainable? The material will be exposed in a practical setting, with real examples, and hands-on ideation.	Knowledge in machine learning. There is a requirement to do pre-reading before attending the first day of the block week. This will be circulated 3 weeks in advance. **Early registration until 31.10.2025!**	School of Computer Science & Information Technology (AIML), Javier Montoya	Rotkreuz
Spring	I.BA_DSPRO2	**Computer Science & Information Technology**	**Data Science Project 2**	Advanced	6	1 Semester	yes	In this advanced course, students will embark on creating sophisticated data science and machine learning solutions. From the outset, they select a project that will be honed into a full-fledged application. The curriculum is an intricate tapestry of expert-led lectures and mentorship sessions, crafted to impart skills that meet the demands of the industry. Beyond the elementary principles of data science, the syllabus delves into intricate topics such as neural network foundations, TensorFlow and Keras utilization, and the nuances of computer vision. The faculty is a blend of seasoned lecturers with deep technical know-how and communication specialists who guide students through both the complex technical aspects and the articulation of their ideas. The program culminates with the students presenting their final projects to a distinguished jury from industry leaders such as Google, NVIDIA, and Thomson Reuters, which plays a significant role in the final grading.	Assessment stage (first year) passed, previous experience in Machine Learning, knowledge of Python and Data Science is required for successful completion of the module.	School of Computer Science & Information Technology (AIML), Umberto Michelucci	Rotkreuz
Spring	I.BA_AR	**Computer Science & Information Technology**	**Augmented Reality**	Advanced	3	1 Semester	yes	The module introduces Augmented Reality. The algorithmic basics from computer vision and computer graphics are taught. The technical basics are discussed and implemented and programmed using examples. Different hardware solutions are compared as well as different tracking methods. In addition to the technology, the focus will also be on the design of AR applications. Finally, the acquired knowledge and skills will be applied in an own project.	Assessment stage (first year) passed	School of Computer Science & Information Technology (INF), Aljosa Smolic	Rotkreuz
Spring	I.BA_ECIOT	**Computer Science & Information Technology**	**IoT Edge and Cloud Computing Technologies**	Advanced	3	1 Semester	yes (oral exam)	Students learn how to build industry-grade IoT edge-to-cloud systems using real-world IoT cloud platforms (AWS, Microsoft Azure, Google Cloud, IBM Cloud). In addition, topics include: IoT protocols (MQTT, LoRA, BLE) and how to use them in applications, end-to-end edge-to-cloud solutions from the sensor devices, data processing and storage in the cloud, to remote device management, security aspects and data analysis. This course dives into the IoT edge and cloud computing aspects towards technologies that transform businesses and people's lives.	Elementary programming skills in C or Python, Linux command line environment and shell scripts, networking fundamentals.	School of Computer Science & Information Technology (INF), Angela Nicoara	Rotkreuz
Fall	I.BA_BSCMA	**Business**	**Business & Supply Chain Management**	Basic	3	1 Semester	yes	In this module, two major topics are discussed: (1) Management Information Systems and (2) Supply Chain Management. Key aspects of organization, management and technology as well as ethical considerations are explained. Topics range from information and knowledge management to e-commerce, operations and supply chain management.	none	School of Computer Science & Information Technology (IIM), Fabian Nikolussi	Rotkreuz
Fall	I.BA_ETHDW	**Business**	**Ethics in the Digital World (former: Business Ethics)**	Basic	3	1 Semester	yes (oral exam)	Students will learn how to develop ethical positions and to understand the ethical dimensions and questions pertinent to their professions. This will include discovering the values which guide their ethical decision making, applying different value systems and utilizing an ethical process to address everyday ethical problems. This will be achieved through short inputs, regular tasks, readings, discussions and exchange with the lecturer.	none	School of Computer Science & Information Technology (IIM), Thomas Wallimann	Rotkreuz
Fall	I.BA_BUINT	**Business**	**Business Intelligence**	Basic	3	1 Semester	no	This module introduces the students to the concept of Business Intelligence as the application of approaches and methods of data analytics to support decision-making processes, using the "R" language, as reference. The module follows a mixed approach, combining knowledge transmission by direct input, knowledge elicitation by discussion and competence creation by direct students exploration and application, including a didactic project.	none	School of Computer Science & Information Technology (IIM), Ramón Christen	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall	I.BA_SUDIT (former name: I.BA_DSTPS)	**Business**	**Sustainable Digital Transformation (former name: Digital Strategies, Products & Services)**	Basic	3	1 Semester	no	The module includes a systematic view of the impact of digitalization on business models and strategies. It will be explained how digitalization affects the whole value chain and internal organizational structures of a company in order of offer innovative customer orientated services and products.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Fabian Nikolussi	Rotkreuz
Fall	I.BA_FININ	**Business**	**Finance & Investments**	Basic	3	1 Semester	no	In time of disruption, macroeconomic turmoil and volatile markets students in International IT-Management assess projects with different methods of capital budgeting, evaluate business models and companies, and are familiar with possibilities of financing (including leverage effect, M&A). Because debt as well as equity can be traded on financial markets they understand the logics & principles of efficient market theory and behavioural finance.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Stefan Kull	Rotkreuz
Fall	I.BA_INTLA_MM	**Business**	**International Law**	Basic	3	1 Semester	no (trial in Fall 2025 with exam in December)	This module teaches students the basics of international business law. The geographical focus is on Switzerland, the EU and the USA, its governmental and legal systems students get to know. Students should become aware of legally relevant issues and become able to find their way in international legal systems. Students should become competent partners of legal experts, such as attorneys at law and legal counsels. The detailed content of the module INTLA International Law can be found in the e-learning tool www.intla.ch, which is used to teach the module.	none	School of Computer Science & Information Technology (WI), Ueli Grüter	Rotkreuz
Fall	I.BA_ITPRB	**Business**	**IT Projects Basics**	Basic	6	1 Semester	no	Project management in the IT, professional communication, teamwork and self-organisation are the main topics of this module. Students will develop their own ideas based on a given task and present them in a professional way to a specific audience. The module will also provide an opportunity to learn basic principles of project management, interview techniques and using makerspaces/fablabs.	None	School of Computer Science & Information Technology (IIM), Fabian Nikolussi	Rotkreuz
Fall	I.BA_INTAC	**Business**	**International Financial Accounting**	Basic	3	1 Semester	yes	Students will learn about how financial information about a company is gathered and entered into accounting / ERP systems correctly. Only good quality data allows good, focused reporting. Studehts will learn how to interpret and explain financial reports (balance sheet, income statement, cash flow statement) and how to become proficient in managing cash flows. This pertains to projects as well as to their own companies. They have to be able to draw up a budget and stick to it.	none	School of Computer Science & Information Technology (IIM), Fabian Nikolussi	Rotkreuz
Fall	TA.BA_INTMA	**Business**	**International Marketing**	Intermediate	3	1 Semester	yes	Importance of international marketing for companies active in today's business environment, assessment of international environment, importance of cultural diversity, development of international marketing strategies and marketing instruments, management and organization of international marketing activities, application in case studies and in a business simulation in teams.	Basic skills in marketing	School of Engineering and Architecture, Sascha Götte	Horw
Fall	TA.BA_CON	**Business**	**Controlling**	Intermediate	3	1 Semester	yes	Managing a company in a business simulation using the Management Control and Accounting (from MM+RW) tools. These instruments comprise Management Information Systems, Business Cases, Capital Budgeting as well as tools for Management Control along the whole value chain.	Basic skills in accounting	School of Engineering and Architecture, Michael Blankenagel	Horw
Fall	TA.BA_LEAD	**Business**	**Leadership**	Intermediate	3	**Intensive week - early registration!** 01.09.2025 - 05.09.2025 (dates tbc)	no	Students shall understand the concept of leadership and its different aspects and success factors by looking at themselves, their teams and organizations. The training will be based on basic theoretical concepts but to make it more applicable in real life one of the key elements of the training is practicing with tools that leaders apply to be successful. One of the aims of the training is to prepare the students for their future roles as leaders: project leaders or product managers.	None. **Early registration until 31.05.2025!**	School of Engineering and Architecture, Michael Kellerhals	Horw
Fall	TA.BA_SI_MM	**Business**	**Service Innovation**	Advanced	3	1 Semester	yes	The service innovation module equips students with key concepts like value co-creation and service-dominant logic, enabling them to blend tangible and intangible. Through case studies and hands-on guidance, students learn to evaluate strategies and design innovative services, fostering a strategic mindset for leading innovation in various industries.	Assessment stage (first year) passed, knowledge in marketing and product management	School of Engineering and Architecture, Shaun West	Horw
Fall + Spring	I.BA_INTAF	**Business**	**International Affairs Economics**	Basic	3	1 Semester	yes	The International Management & Economics module initially focuses on international aspects and examines these using the USA, the EU and China as examples. Economic development, economic policy as well as foreign policy of these players and strategies to respond to economic and political challenges of these players are analyzed in class.	none	School of Computer Science & Information Technology (IIM), Stefan Kull	Rotkreuz
Fall + Spring	I.BA_MAAC	**Business**	**Management Accounting**	Intermediate	3	1 Semester	yes	Students learn concepts and instruments that facilitate a company's effective supply with relevant information; methods that companies use in this area and thus contribute to pursuing and fulfilling corporate objectives.They have the skills to conduct a systematic analysis of costs, revenue and prices. They are able to structure a business plan and implement it in an Excel sheet.	Basic skills in accounting	School of Computer Science & Information Technology (WI), Stefan Kull	Rotkreuz
Fall + Spring	I.BA_ABIZ_MM	**Business**	**AI & Business**	Advanced	3	1 Semester	no	In 2015, Gartner coined the term «Algorithmic Business» to describe this next step in digital business and to pay tribute to the latest breakthrough developments in artificial intelligence, machine learning (e.g. Deep Learning), and data science. The focus is on the profitable combination of algorithms and business models adapted to them. The module deals with the development of business ideas in relation to data and artificial intelligence. **Exceptionally, this module is NOT running in Fall 2024!**	Basic knowledge in Entrepreunership	School of Computer Science & Information Technology (AIML), Kevin Kuhn	Rotkreuz
Spring	I.BA_LSPHR	**Business**	**Leadship & HR**	Basic	3	1 Semester	yes	The module addresses current digital trends and shows the impact of digital transformation on leadership behavior and HR processes. In addition to technical tools (e.g. central databases), topics such as agile processes, delegation of responsibilities, digital competence of employees, leadership techniques, etc. are also covered.	none	School of Computer Science & Information Technology (IIM), Fabian Nikolussi	Rotkreuz
Spring	TA.BA_MM+RW	**Business**	**Marketing Management & Accounting**	Basic	6	1 Semester	yes	Fundamentals of marketing, knowledge and application of the methods of marketing research, conception, implementation and controlling, use of financial reporting and its analysis as well as cost accounting, contribution margin accounting and costing as instruments for decision-making, applied in a business game throughout the semester.	none	School of Engineering and Architecture, Michael Blankenagel	Horw
Spring	I.BA_STMGT	**Business**	**Strategic Management**	Intermediate	3	1 Semester	no	Strategic Management includes a systematic approach and integrated view on various corporate strategies. First students learn how to "read" and analyse corporate strategies. Then students will dive into strategy work including business model design. Methodologically it will be focused on applying a conceptual framework including the use of different tools of the strategy toolbox. Finally, framework and tools will be applied in case studies.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Helen-Deborah Maier	Rotkreuz
Spring	I.BA_INMAC	**Business**	**International Management Accounting**	Intermediate	3	1 Semester	no	This course will address the concepts and tools that enable effective management. Students will learn which instruments are suitable for successfully implementing business objectives and how these can be used. They will learn to systematically analyse costs, expenses and prices and will be able to create and structure systematic budgets.	Basic skills in accounting	School of Computer Science & Information Technology (IIM), Stefan Kull	Rotkreuz
Spring	I.BA_DITEC	**Business**	**Digital Technology**	Intermediate	6	1 Semester	no	This module provides a theoretical and practical introduction to applied economic and social science research. It focuses on the application of qualitative research methods and the writing of a scientific paper: students choose a research question, conduct a literature review, collect, and analyze data. Finally, they write a structured research paper indicating all central findings. Topics range from unconditional basic income to the social welfare of the future, cooperatives, on-demand economy and trade unions.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Fabian Nikolussi	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Spring	TA.BA_DBM_MM	**Business**	**Digital Business Models**	Advanced	3	1 Semester	yes	The module explains what business model innovation is and how this is embedded in strategic management. Students are introduced to the most important business model frameworks and provided with hands-on guidelines to select, develop, and apply them to digital technologies as an enabler for disruptive innovation. This will be applied to a real-life case studies.	Basic knowledge in strategic management, product management and controlling	School of Engineering and Architecture, Shaun West	Horw
Spring	TA.BA_ONMA	**Business**	**Online Marketing**	Advanced	3	1 Semester	yes	The module discusses the relevance and use of online marketing as part of companies' marketing measures and concepts. Current and common instruments of online marketing are critically examined and their use in an overall marketing strategy is evaluated. Common risks and opportunities as well as their measurement are also explored.	Assessment stage (first year) passed, basic knowledge in strategic management, product management and controlling	School of Engineering and Architecture, Angelos Apostolidis	Horw
Spring	TA.BA_OAE_MM	**Business**	**Operational Excellence**	Advanced	3	1 Semester	yes	Deepened analysis of the Supply Chain of industrial companies, in search of Excellence, based on the principles and tools of the Toyota Production System and its evolution into Lean Management. These concepts and tools will be explained and applied in several case studies and in a final production simulation game, so that participants will "touch with their hands" the significant difference between traditional and „lean“ approaches in Operations. The contents will be delivered in person in class or by live videoconference according to the didactic needs.	Knowledge in supply chain management, marketing, controlling, strategic and product management	School of Engineering and Architecture, Julia Rohrer	Horw
Fall	I.BA_ASACPH	**Interdisciplinary Module**	**Introduction to Asia Culture, Politics & History**	Basic	3	1 Semester	yes	This course will address the cultures, histories, political systems, and religion of four Asian countries. Students will learn about China, India and two other countries. Lessons will consist of groupwork, presentations, interactive media, and discussions.	none	School of Computer Science & Information Technology (WI), Benjamin Haymond	Rotkreuz
Fall	I.BA_ICPRO	**Interdisciplinary Module**	**Intercultural Project**	Basic	6	1 Semester	no	In an international environment it is important to behave appropriately to people who have grown up with different attitudes and values. The main goal of this module is to provide theoretical and practical examples whereby you will examine your own cultural background, attitudes, values and biases and gain knowledge and skills in the area of cross-cultural management. This module is conducted in the form of a COIL (Collaborative Online International Learning) with a foreign partner university.	none	School of Computer Science & Information Technology (IIM), Ute Klotz	Rotkreuz
Fall	TA.BA_CE_SB_MM	**Interdisciplinary Module**	**Corporate Ethics and Sustainability**	Advanced	6	1 Semester	yes	Fundamentals of Business Ethics (BE) and Corporate Responsibility (CR) for a practical use in different management positions. Students learn on the basis of case studies to get in contact with practitioners for exchange of experiences. Basic and well-grounded overview about BE /CR and central concepts, empirical situation, theoretical discussion and the implementation in management practice. Students will apply gained knowledge in energy-related simulation game allowing to experience real-world ethical challenges. IMPORTANT NOTE: The participation fee for the Business Ethics Simulation Game can amount to 15-20 CHF per student (participation is compulsory).	Assessment stage (first year) passed, knowledge in marketing management and accounting	School of Engineering and Architecture, Claas Wagner	Horw
Fall	TA.BA_OEK	**Interdisciplinary Module**	**Ecology**	Basic	3	**Intensive week - early registration!** 08.09.2025 - 12.09.2025	no	Communication of interactions and life cycles in ecosystems, the effects of climate gases on the environment and atmosphere, life cycle assessments (e.g. relating to tourism) and environmental policies/economics.	None. **Early registration until 31.05.2025!**	School of Engineering and Architecture, Claas Wagner	Horw
Fall + Spring	I.BA_SOMS	**Interdisciplinary Module**	**Social Media & Storytelling**	Basic	3	1 Semester	no	This is an introductory course into the art and science of social media with customer-centred storytelling techniques. The main objective of the course is to develop the knowledge, skills, and experience required to plan, execute, and critically engage with and analyse a social media & storytelling strategy or campaign. By using case studies (Dropbox, Microsoft, Swiss Air, Humans of New York, etc.), design thinking methods, and online and offline “listening” among other methods, students will find and structure their stories, as well as prototype them using design thinking methodologies, test, improve, and measure KPIs. Students will be evaluated continuously during the semester as well as based on their group projects. Having social media profiles is not a requirement. Insta: sommes_SOMS	Assessment stage (first year) passed	School of Computer Science & Information Technology (WI), Georgiana Bigea	Rotkreuz
Fall + Spring	I.BA_COMS	**Interdisciplinary Module**	**Conflict Management Strategies**	Basic	3	1 Semester	no	Imagine you are given a task at work, for which you have to work overtime. What do you do? Refuse or do it? In this course, you will learn how to deal with such situations. You will learn how to optimize your strategies when interests are different or even conflicting. The journey starts from the personal approach to conflict and negotiations, learning how to prevent emotions from overpowering us. Equipped with argumentation skills, we advance through conflict analysis models, workplace tensions, and how to negotiate a deal. This is an 100% English-taught module.	none	School of Computer Science & Information Technology (WI), Georgiana Bigea	Rotkreuz
Fall + Spring	I.BA_ICCO	**Interdisciplinary Module**	**Intercultural Competences**	Basic	3	1 Semester	no	In today's globalized society, cultural interactions play a significant role in personal and professional life. Intercultural competences are crucial in this context. This module provides students with practical skills for navigating diverse cultural environments, promoting inclusivity, culturally-sensitive communication and conflict management skills. Emphasizing awareness of bias and bridging cultural divides, it encourages embracing diverse viewpoints for mutual growth. The module delves into intercultural dynamics within professional settings, drawing from scientific research, theories and tools as well as practical examples. Students gain insights into how digitalization intersects with intercultural communication, developing essential skills for success in our interconnected world.	Assessment stage (first year) passed	School of Computer Science & Information Technology (AIML), Tamara von Rotz	Rotkreuz
Fall + Spring	Fall: I.BA_RIPRO (former name: I.BA_ACMET) Spring: I.BA_RIPROSS (former name: I.BA_ACMETSS)	**Interdisciplinary Module**	**Academic Methods (from Fall 2025: Research IT Projects)**	Basic	3	1 Semester	no	This course is aimed at final year students to evaluate and develop their thesis writing abilities and to learn and to apply scientific/academic methods. There are sessions which will cover - the use of scientific methods such as qualitative interviews, video analysis, diary studies and text mining and - the overall structuring of the bachelor thesis proposal, for example, writing the introduction; the literature review; the methodology chapter; discussion chapters; the conclusion and the abstract.	Assessment stage (first year) passed	School of Computer Science & Information Technology (IIM), Ute Klotz	Rotkreuz

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall + Spring	TA.BA_INTPRO	**Interdisciplinary Module**	**International Project**	For all levels	6	1 Semester (Monday and Tuesday mornings, weekly)		Ever wanted to know more about the early innovation method Design Thinking and how to come up with a product idea, which make people queue outside your store? Ever wanted to work in an international team and advance an idea, you and your team developed yourself? Have you ever wondered what Circular Economy is all about and what does it mean for you as a future decision maker and creator of future products? If you are curious and creative and this is what you would like to know more about, this is your course. Theory: Hands-on introduction to Design Thinking, Business Models, Circular Economy and Cross Cultural Theory. All theories will be combined and applied in the context of a project. Project based working: This is a practical class, where students work in groups, apply the various theories to the project and are coached along by the Professor. Bilingual Module: Content and coaching will be delivered in English and German, students can choose which language they prefer. Additional Opportunity Coaching Certificate: You see yourself as design thinking coach in the future? This is a course where you can develop your coaching skills further. 4 lessons per week: input and coaching 4+ lessons per week: self organized work in project groups, prototyping, user tests, etc.	English Level B2 or higher.	School of Engineering and Architecture, Christine Grimm	Horw
Fall + Spring	TA.BA_SWISS_ISA	**Interdisciplinary Module**	**Swissness - Swiss Language and Culture**	Basic	3	1 Semester	yes (oral exam)	This class is rich with interactive learning experiences that allow students to "understand" Switzerland, navigate the local cultures (there are 4!) and develop intercultural skills. The class' intercultural teaching approach allows students to experience a foreign culture, exchange cross-cultural notions and link new knowledge with their own diverse backgrounds. It is offered as a general education class and transcends narrow disciplinary boundaries because of the wide variety of topics (politics, economy & banking; direct democracy; sports; religion; art & architecture; history; women & minorities; sustainability and various aspects of Swiss culture). Students are also given time to choose and learn about their own (Swiss) area of interest, be it arts, economy, Swiss export products etc. and present their work.	English Level B2 or higher.	School of Engineering and Architecture, Nina Zimnik	Horw
Spring	I.BA_ANCPH I.BA_ANGCPH	**Interdisciplinary Module**	**Anglo-Saxon Culture, Politics & History**	Basic	3	1 Semester	yes	This course will address the cultures, histories, and political systems of four Anglo-Saxon countries. Starting with England and the U.S., students will examine four unique aspects: political systems, important historical trends, major religious movements, and artistic and cultural movements of these countries. Students will also study these aspects in two additional countries such as Scotland, Ireland, Canada, Australia, and New Zealand, and South Africa. Lessons will consist of groupwork, presentations, interactive media, and discussions.	none	School of Computer Science & Information Technology (IIM / WI), Benjamin Haymond	Rotkreuz
Spring	TA.BA_WIND_ECO	**Interdisciplinary Module**	**Windpower and Ecotechnology**	Basic	3	**Intensive week - early registration!** 03.02.2025 - 08.02.2025	no	Basics of wind energy engineering – starting with the determination of wind power potentials – applied to different kinds of turbines and systems, including selection of materials and components up to the estimation of electrical power production. Based on actual installations, the stakeholder analysis and environmental impact analyses are applied in order to assess the impact of emissions on humans and ecosystems.	English Level B2 or higher. **Early registration until 07.11.2024!**	School of Engineering and Architecture, Claas Wagner	Horw
Spring	TA.BA_EDAF	**Interdisciplinary Module**	**Energy Data Analytics & Forecasting**	Advanced	3	**Intensive week - early registration!** 03.02.2025 - 08.02.2025	no	In this intensive week, we consider how machine learning can be used to help solve the energy forecasting problem. The participants will apply those algorithms to specific use cases regarding photovoltaics, e-mobility, storage or self-consumption optimization in order to predict load and/or production. Real-world data will be used, and practical experience will be provided by the experienced lecturers that facilitate the course. Through your project you will have practical examples that can be taken forward in your academic or professional life.	Knowledge in linear algebra, applied statistics and programming for data science. **Early registration until 07.11.2024!**	School of Engineering and Architecture, Antonios Papaemmanouil	Horw
Fall + Spring		**Interdisciplinary Modules**						**More interdisciplinary courses can be found here:** https://www.isa-campus.ch/en/angebote/			
Fall	I.BA_AEDC1	**Language**	**Advanced English Diploma Course I**	Basic	3	1 Semester	no	This course will prepare students for the IELTS Academic Test and will cover the skills of reading, listening, writing, and speaking in preparation for the test. Grammar, vocabulary, and pronunciation will also be included as key components of the course. The target level is C1 (Band 7.0). Students will be regularly assessed during the semester and will also complete a mock exam before enrolling for the actual exam. **All students are required to take the IELTS external exam before the end of December and pass with a Band 7.0 as minimum in order to pass this module. All expenses for the IELTS exam have to be paid by the student.**	English Level B2 or higher.	School of Computer Science & Information Technology (IIM), Catherine Hayden	Rotkreuz
Fall	I.BA_ENGDBU	**Language**	**English for Digital Business**	Intermediate	3	1 Semester	yes	This course will focus on developing English in summarzing and reformulating ideas through the topics of digital history; e-commerce; business, finance, and management; and digital disruption. It is an interactive course that will assist student in improving both their writing and speaking skills. The aim of the course will be to raise students to a CEFR level of B2+ or higher.	English Level B2 or higher.	School of Computer Science & Information Technology (WI), Tamara von Rotz	Rotkreuz
Fall	I.BA_ENGTCS	**Language**	**English for Technical & Computer Science**	Advanced	3	1 Semester	yes	Students will familiarize themselves with the topics relating to computer science, cybersecurity, and communication. The course will focus on improving student lexical knowledge, writing skills in the form of summaries, and speaking and discussion skills through the exploration of various topics in the field of computer science, cybersecurity and other related topics.	English Level B2+ / C1	School of Computer Science & Information Technology (WI), Benjamin Haymond	Rotkreuz
Fall + Spring	W.SZ_DEUFF_A1	**Language**	**German as a foreign language - beginner course A1**	Basic	3	1 Semester Wednesdays 4:00 pm - 6:10 pm	no	The module provides insights into German life, culture and politics and also topics about life as a student. This course is aimed at students for whom German is not their first language - beginners. The module produces marked improvements in students command of the language. It requires serious motivation. Students successfully completing the module are capable of understanding and using everyday expressions and simple sentences. Students can make themselves understood if the person they are talking to speaks slowly and clearly and helps them. **More information and enrolment on:** https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/campus/language-centre/courses-and-enrolment-fs/deutsch-als-fremdsprache-daf-grundkurs-a1/	None. **Students have to enrol themselves: enrolment phase starts beginning of Jan / beginning of Aug!**	School of Business, Barbara Lima Rampolla	Luzern
Fall + Spring	W.SZ_DEUFF_A2	**Language**	**German as a foreign language - A2**	Basic	3	1 Semester Tuesdays 4:00 pm - 6:10 pm	no	The module provides insights into German live, culture and politics now more deepend and covers topics related to life as a student. This course is aimed at students for whom German is not their first language and whose command of German has reached level A1. Students can make themselves understood in routine situations involving direct exchanges of information concerning familiar and commonplace things. Students can describe terms where they come from, their education and training, the immediate surroundings and things in connection with immediate needs. **More information and enrolment on:** https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/campus/language-centre/courses-and-enrolment-fs/deutsch-als-fremdsprache-daf-aufbaukurs-a2/	German Level A1 (e.g. intensive course). **Students have to enrol themselves: enrolment phase starts beginning of Jan / beginning of Aug!**	School of Business, Isanna Mende	Luzern

Semester	Course Code	Field of Study	Course Name	Level	ECTS (1)	Duration	Exam in exam period (2)	Brief Description of Course	Prerequisites (in general: English level at least B2)	Responsible / contact person	Campus
Fall + Spring	W.SZ_DEUFFINT_A1	**Language**	**German as a foreign language - beginner course A1 intensive**	Basic	3	**Intensive week - early registration!** Mornings only: 03.02.2025 - 15.02.2025 01.09.2025 - 12.09.2025	no	The module provides insights into German life, culture and politics and also topics about life as a student. This course is aimed at students for whom German is not their first language - beginners. The module produces marked improvements in students command of the language. It requires serious motivation. Students successfully completing the module are capable of understanding and using everyday expressions and simple sentences. Students can make themselves understood if the person they are talking to speaks slowly and clearly and helps them. **More information and enrolment on:** https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/campus/language-centre/courses-and-enrolment-hs-block-weeks/deutsch-als-fremdsprach-daf-intensivkurs-a1/	None. **Students have to enrol themselves: enrolment phase starts beginning of Jan / beginning of Aug!**	School of Business, Isanna Mende	Luzern
Fall + Spring	I.BA_AEDCIT	**Language**	**Academic English IELTS Preparation**	Basic	3	1 Semester	yes	This course will prepare students for the IELTS Academic Test and will cover the skills of reading, listening, writing, and speaking in preparation for the test. Grammar, vocabulary, and pronunciation will also be included as key components of the course. The target level is C1 (Band 7.0). Students will be regularly assessed during the semester and will also complete a mock exam. Note: Students are eligible to be dispensed from the module-end exam if they pass the IELTS Academic external exam with a Band 6.5 or above, before the date of the module-end HSLU exam. **If students choose to take the IELTS external exam, all expenses for the IELTS exam have to be paid by the student.**	English Level B2 or higher.	School of Computer Science & Information Technology (WI), Catherine Hayden	Rotkreuz
Fall + Spring	W.SZ_ENG_IECC	**Language**	**Intercultural and English Competence Course B2-C1**	Intermediate	3	**Intensive week - early registration!** 10.02.2025 - 14.02.2025 08.09.2025 - 12.09.2025	no	This intensive module in English concentrates on both written and oral communication in English. The immediate aim is to enable students to apply their English more competently in degree-course subjects. The course begins with personalized feedback on set writing tasks and a check-up on written standards, including grammar, spelling, punctuation, paragraphing and text/discourse construction. It then moves on to consider verbal and non-verbal elements in presentations and discussions. A further aim is to enable students to improve their intercultural communication in English. The topic of intercultural communication will be enhanced by the collaboration between participants from the various disciplines with overseas students. **More information and enrolment on:** https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/campus/language-centre/courses-and-enrolment-hs-block-weeks/intercultural-and-english-competence-course-b2/	English Level B1 - B2. **Students have to enrol themselves: enrolment phase starts beginning of Jan / beginning of Aug!**	School of Business, Jillaine Farrar	Luzern
Fall + Spring	I.BA_ENGFTD	**Language**	**English for Future Technology Development**	Intermediate	3	1 Semester	yes	This course will examine topics such as big data and data analytics, AI & robotics, the modern workplace and digital security. Students will develop skills in correspondence and presentations. Classes will consist of discussions, presentation and writing practice. Students will be prepared to for a B2+/C1 CEFR scale.	English Level B2 or higher.	School of Computer Science & Information Technology (WI), Tamara von Rotz	Rotkreuz
Fall + Spring	TA.BA_TECW_MM	**Language**	**Technical Writing**	Intermediate	3	1 Semester	no	The module TECW enables students to consolidate the skills they need when writing a scientific technical report on a project that are required at advanced level in a Bachelor of Engineering degree program. Students write a scientific project report for their Industrial Project (PAIND). To this end, they prepare an Exposé to gain clarity about the initial situation and their research approach and to argue these coherently. In addition, they submit 2 more chapters of the final report (PAIND). Individual Coachings (1-1) support them to gain those skills.	English Level C1	School of Engineering and Architecture, Irene Dietrichs	Horw
Spring	I.BA_AEDCTO	**Language**	**Academic English TOEFL Preparation**	Basic	3	1 Semester	no	This course will prepare students for the TOEFL iBT Test and will cover the skills of reading, listening, writing, and speaking in preparation for the test. Grammar, vocabulary, and pronunciation will also be included as key components of the course. The target level is C1 (96 points and above). Students will be regularly assessed during the semester. Note: Students are eligible to be dispensed from the module-end exam if they pass theTOEFL iBT external exam with a minimum of 96 points, before the date of the module-end exam. **If students choose to take the external TOEFL iBT exam, all expenses for the TOEFL exam have to be paid by the student.**	English Level B2 - C1	School of Computer Science & Information Technology (WI), Tamara von Rotz	Rotkreuz
Spring	I.BA_PROTCO	**Communication**	**Professional and Technical Communication**	Intermediate	3	1 Semester	yes	This course focuses on professional communication and technical writing and speaking including writing basics, types of texts, resume writing, interviews and presentations. Lessons will include lectures, groupwork, and practice. Performance will be assessed with a portfolio and a technical presentation. Students should have at least a B2 English level.	English Level B2 or higher.	School of Computer Science & Information Technology (WI), Benjamin Haymond	Rotkreuz
Spring (will not take place in Spring 2025)	I.BA_ENGSDC	**Language**	**English for Strategic and Digital Communication**	Advanced	3	1 Semester	no	This course will develop students' English communication skills. Argumentation and persuasive techniques will be taught through the window of digital communication (blogs and webinars) with topics including presentations, global communication, social media and team building. Students will be evaluated through the submission of a vlog or webinar (due: mid semester) and a written exam.	English level C1	School of Computer Science & Information Technology (WI), Benjamin Haymond	Rotkreuz
Spring	I.BA_CAEPRO	**Language**	**Cambridge Proficiency**	Intermediate	3	1 Semester	yes	This course covers the required skills for the Cambridge Proficiency English Exam (C2). All aspects of the C2 exam will be covered in the class, around the syllabus outlined by Cambridge at this level. Reading, Writing, Speaking, Use of English and Listening are the skills taught in this class. The lessons follow the CEFR requirements to pass C2 and will be taught by a qualified and experienced Cambridge English examiner. Note: Students are eligible to be dispensed from the module-end exam if they are enrolled in the module and they pass the external Cambridge C2 exam within the current semester and provide the results of the external exam before the module-end exam date. **If students choose to take the external Cambridge exam, all expenses for the exam have to be paid by the student.**	English level C1	School of Computer Science & Information Technology (WI), Catherine Hayden	Rotkreuz
Fall + Spring		**Language**					no	**More language courses can be found here:** https://www.hslu.ch/en/lucerne-university-of-applied-sciences-and-arts/campus/language-centre/			

(1) One ECTS credit represents 30 working hours. An academic year is equivalent to 60 ECTS credits. In order to acquire a Bachelor's degree, 180 ECTS credits are required, while 90 to 120 ECTS credits are required for a Master's degree.
(2) "Yes" means that an exam will take place during the exam period and has to be attended in person. The exam period in fall semesters lasts from mid-January until early February; in spring semester it lasts from mid-June until early July. "No" means that the final evaluation of the module is based on a project work, essay, group presentation etc. Further information will be provided on demand.