Lucerne University of
Applied Sciences and Arts

HOCHSCHULE
LUZERN

Business
FH Zentralschweiz

M4: Trends and Innovations in Finance

General Information

Module Code W.MSCBF_TIF03.25
Programme Master of Science / Banking and Finance
Type of Module Core module in focus programme
Level of Module Specialisation
ECTS Credits / Workload 6 ECTS Credits (180 hours)

Module Dependencies

Pre-requisites Module 1 and 2
Follow-up modules

Module Aims

In recent years, the financial sector has come under increasing pressure. Many financial institutions consider digitalization an opportunity to cope with the currently challenging situation, as it may help improve revenues, reduce costs and risks, or stabilize these key metrics. FinTech, as the innovative spearhead of technology in finance, benefits from the increasing pressure on established financial services providers. Consequently, the FinTech sector has experienced significant growth in recent years. The emergence of the FinTech industry might change the role of banks and has the potential to disrupt the market. In this module, students comprehensively understand how technology changes the financial landscape and which new technologies and business models emerge.

Submodule 1: Technologies and Business Models

Submodule code TBM
ECTS Credits / Workload 4 ECTS Credits (120 hours)

Learning Outcome 1

The students are able to reflect on the transformative change of FinTech in the financial sector as well as the underlying technologies.

	Importance	Relevant NQF-Descriptors
Subject knowledge and skills: Students know the various segments of FinTech and underlying technologies.	high	knowledge; application; judgement
Problem-solving: Students discuss the effect of FinTech on the financial sector.	medium	knowledge; application
Methodology: Students can assess the relevance of segments of FinTech within the financial sector.	medium	knowledge; application

Content Outline

- Introduction Information Technology (Ankenbrand)
  - Introduction and overview of the module
  - Introduction Infrastructure (Hardware, Cloud, etc.)
  - Introduction Networks / Communication

- Introduction Database

- Distributed Ledger Technology I&II (this teaching sessions is held together with the first day of the Crypto Assets Course) (Bieri)
  - Introduction to DLT
  - Introduction to crypto assets

- Data Analytics (Fister)

- Investment (Agnesens)

- Artificial Intelligence (AI) (Ankenbrand)
  - Introduction AI
  - Neural Networks
  - Large Language Models
  - High Performance Computing / Quantum Computing

- Big Data (Michelucci)

- Infrastructure (Fischer)
  - Open Finance
  - Cloud Computing

- Deposit & Lending (Amrein)
  - Introduction to Marketplace Lending (MPL) and Crowdfunding
  - Relevance of segments in MPL and market participants

- Distributed Ledger Technology III (Ankenbrand)
  - Use cases of DLT
  - Crypto assets as an asset class

- Payment and Digital Client Business (Dietrich)

Teaching and Learning Methods	
Contact Hours	seminar; exercises; lecture; coaching
Directed Study	project dissertation

Workload	
Contact Hours	48 lessons / 36 hours (30%)
Directed Study	12 lessons / 9 hours (7.5%)
Private Study	75 hours (62.5%)

Assignments and Assessments

Assessment Type	Quantity	Weight	Form	Evaluation Type	Time
Written examination	90 minutes	100%	closed book	grades	during exam weeks

Submodule 2: FinTech Boot Camp

Submodule code TIB

ECTS Credits / Workload 2 ECTS Credits (60 hours)

Learning Outcome 1

Students develop innovative business models with an emphasis on financial aspects and business development.

	Importance	Relevant NQF-Descriptors

Subject knowledge and skills: Students are able to develop business cases.	medium	knowledge; judgement
Problem-solving: Analyse the strategic opportunities for the incumbents within the market.	medium	knowledge; judgement
Methodology: Are able to build a new business model	high	knowledge; application; judgement; communication

Learning Outcome 2

Students learn about design thinking methods and how to use them

	Importance	Relevant NQF-Descriptors
Subject knowledge and skills: Students are introduced to the main principles of design thinking	high	knowledge
Problem-solving: Students are able to use empathy maps and customer journeys	medium	application
Methodology: Students are able to use design thinking for own projects	medium	knowledge; application

Content Outline

Groups of students develop start-up business models. At the end of the workshop, the student groups pitch their cases and compete against each other.

Presence is mandatory during the workshp. Absence is graded as "fail".

Note: In case of documented uncooperative behaviour of one or several team members, the Head of Programme can subtract a maximum grade of 1.0 from the final grade of the student/s in a group, leading to individual grades for the team members.

Teaching and Learning Methods

Contact Hours	lecture; coaching; field trip; guest lectures; group work; simulation
Directed Study	group work; partner work

Workload

Contact Hours	20 lessons / 15 hours (25%)
Directed Study	20 lessons / 15 hours (25%)
Private Study	30 hours (50%)

Assignments and Assessments

Assessment Type	Quantity	Weight	Form	Evaluation Type	Time
Oral group assignment	20 minutes	100%	presentation	grades	during semester