

Curriculum and Module Handbook
Master's Degree Programme
in Finance

(Master of Science in Finance)

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1. Profile of the degree programme

1.1. Study profile

The Principality of Liechtenstein is a country with a strong international cross-border orientation. Due to the fact that Liechtenstein is not only embedded in a customs and monetary union with Switzerland, but also a member of the European Economic Area, Liechtenstein acts as a bridge between the European Union and Switzerland, the world's largest wealth management centre for international assets (Deloitte 2018). This unique situation allowed the small Principality to develop into one of the most financially experienced cross-border regions of the world and become a highly qualified wealth management location. Our graduate programme in Finance provides the know-how required to understand and manage highly-sophisticated wealth management services, as well as international activities, products and services.

According to the University's mission statement the University of Liechtenstein prepares its students "to take on leading roles in government and society, politics and business, culture and academia, by supporting talented, motivated and independent young people in their personal growth." The master's degree programme in Finance is designed to prepare students to make such decisions required to successfully manage the challenges and responsibilities of many finance-related jobs. Finance students acquire the necessary subject knowledge and several methodologies to work and solve problems common for the financial services industry in line with the university mission "... we educate highly qualified professionals to the benefit of Liechtenstein, the surrounding region and the international sphere...".

The Master's degree programme in Finance aims to provide state-of-the-art knowledge of finance. It focuses on the core aspects of Asset Management, Risk Management and International Finance. Additionally, students learn methodological approaches needed to solve ambitious finance-related problems. Within the programme, students take on leadership responsibility and work in teams. This education also provides a good basis for a PhD programme as well as for academic careers. Students have the opportunity to intensify their education in specific fields of finance, by choosing various very unique courses from a basket of Core Electives. The faculty offers specific courses out of their research fields building on the current research focus. Generally, the basket of Core Electives addresses current topics such as Innovative Finance, Sustainable Finance, International Taxation for Wealth Management and International Law for Wealth Management.

These electives offer students a possibility to participate in faculty's current research projects and profit from their latest results as well as learning from the locational USP's of the Liechtenstein's financial market.

Core Electives have been developed for two reasons:

- As the research fields of the Institute for Finance are closely related to the needs of the Liechtenstein Financial Market, Core Electives form an important USP of this Master's programme, being a forerunner within these specific fields of Finance. Thus, our graduates shall be prepared for future challenges caused by ongoing digitalization and by the transformation to a sustainable society.
- Students are expected to independently develop their thesis topic (and research question), which should be based on research interest of faculty members. Now, offering Core Electives gives students an introduction into research fields of faculty members and should help students, supported by the module Research Greenhouse, to independently develop an adequate thesis topic.

This programme combines high academic standards with the development of practical knowledge and convincing behaviour in communication. To reinforce the latter, this programme includes in the first semester modules, which help to develop speaking and writing skills of students. Modules like "Effective Communication" (with English business communication, presentation, argumentation and negotiation),

“Seminar in Applied Finance” as well as the course “Scientific Writing” should contribute to the development of writing and verbal communication skills above the average of comparable master programmes. To reach that goal, “Effective Communication” is an essential module and forms one of the unique selling proposition of this programme.

This programme attracts talents from all over the world and qualifies them for challenging positions and encourages them to take responsibility for their company and the society. Graduates will have excellent knowledge in finance and risk management, they will have analytical and methodological skills, leadership abilities and good and adaptive communication skills.

The programme has been developed based on industry demands of expert knowledge, methodological skills, entrepreneurial understanding in financial decision making and team orientation. We prepare students for professional careers in international settings by offering projects conducted in collaboration with financial services companies and international partner universities. Students will be well-prepared for a professional career within the financial services industry, in related regulatory and supervisory authorities as well as in consulting institutions.

This programme offers a very unique combination of highest academic standards and practical education, as the University can revert to a strong relationship to the players of the Liechtenstein financial market place. This is currently the only Master’s degree in Finance, being appointed as academic university partner of the top three worldwide existing professional education programmes: CFA Society (Chartered Financial Analyst), CAIA (Chartered Alternative Investment Analyst) and GARP (Global Association of Risk Professionals). This programme covers the Body of Knowledge curriculum of all three associations at the requested level. Students are invited to profit from that by starting the exams already during their MSc studies in order to gain advantages in subsequent job interviews. Based on the academic partnership, interested students can apply for scholarships.

To achieve our ambitious goals, the Master’s degree programme in Finance creates an innovative and supporting learning environment, which allows students to study very topic-oriented and research driven, which qualifies them to grow into leadership roles in financial markets. The degree programme is based on six core principles, which at first sight contradict each other. We bring together the seemingly opposed principles, and show that they are in fact complementary, thus strengthening our Master’s degree in Finance:

- **Personal Support AND International Focus:**

We are a small university with personal relationships. This is not only expressed in a very favourable student-faculty ratio, but also in meetings and discussions outside the classroom. The small size leads to a close interaction between students and faculty members and an individual support of students. Despite the small size, this university possesses a large international network, also used to the advantage of students (for an exchange semester abroad). In the master’s degree in finance, we offer an Educational Journey to leading international financial hubs every year. This is an optional offer for students and they have to pay all their travel and living expenses, but receive a fully organized journey of one week with many company and business visits and some cultural events. Because of the close relationship to the Liechtenstein financial market there are many opportunities to invite guest lecturers from practice.

- **Practical Relevance AND Research Orientation:**

This Master’s degree programme is related to our PhD-programme. In the Master’s programme, we already teach many methodological approaches, which at other universities are often reserved for the PhD-programme. We motivate students to write their thesis in research fields of faculty members. Thus, they have an opportunity to participate in state-of-the-art research projects. On the contrary, we also prepare students for working in practice. In lectures, theories are always applied and several hands-on projects are offered during the first three semesters. Based on our strong network with practice, faculty members are also able to enrich courses with their practical experience. Guest lectures from invited business leaders intensify the understanding for practical problems and round up the programme.

- **Flexible Organization AND Guided Learning**

This programme combines complementary modules as well as many elective courses. The modularization helps to increase the flexibility of studying within the programme. Although being a full time programme, the concentration of lecturing on selected days per week preserves students' opportunities to gain time blocks for a concentrated studying and working on assignments or essays. At the same time, this time structure facilitates the combination of studying with other duties, like children care or for preparing occupational aspects. The latter will lead to a part-time study structure of the programme and to a prolongation of the study time.

Courses are regularly evaluated and results will be included into the general feedback circle.

Most courses are lectured either within the first or second half of the semester, having the examination either during the course or after termination of a course.

On the other hand, the personal relationship between faculty and students leads to a stronger discussion culture between them and fosters a stronger personal development of students. Several projects over the four semesters encourage the development of social competences and leadership skills. Also various cross elective courses focus the development of skills.

The master's degree programme in finance is backing the university's overall strategy as it follows a strategy of excellence and focuses on private wealth management, one of the university's selected research fields, and within that supporting innovation and sustainable development to the benefit of society. To summarize, this programme stands for

- a personal relationship between students, faculty members and administrative staff,
- a strong international focus,
- an ambitious research orientation,
- an integration of practical relevance, i.e. consulting projects with sponsors from the financial industry,
- a very flexible organization,
- a focus on guided learning and personal development.

1.2. Qualification profile

Graduates of the Master's Degree Programme in Finance work as highly qualified leaders and specialists in traditional banking and other type of finance companies, in asset and risk management, financial product development, risk and liquidity planning, portfolio and wealth management, fund management, insurance undertakings, in fintechs and insurtechs, investment banking, financial advisors and family offices. They work for the finance and treasury department of manufacturing firms, for all types of consultant firms, for financial market authorities or central banks and in governments. The programme also prepares for academic careers; our graduates are eligible for doctoral programmes.

To be prepared for such career opportunities students achieve four main educational goals through this degree programme:

- **Our graduates are capable to find and evaluate reasonable research gaps and problem solving methods in their future profession.** Students independently identify existing research gaps in a specific field and develop relevant and testable research questions. Furthermore, they choose an appropriate methodological approach to answer these research questions.
- **Our graduates can evaluate and manage financial risks.** Our students verbally analyse and discuss problems in the context of financial risk and provide management solutions.
- **Our graduates are effective communicators.** Our students write documents with high standards in terms of structure, consistency and rationality of arguments presented.

- **Our graduates are able to autonomously conduct in-depth academic research projects in finance.** Our students describe and apply an appropriate research methodology for their research project and have a clear understanding of the limitations of the approach chosen.

While undergraduate degrees mainly focus on basic concepts to provide a global overview and provide a basic academic foundation permitting professional entry, a Master's degree programme has a more specialised focus and contains additional methodological skills required for the intended specialisation. Based on a relatively intensive relationship and a continuous exchange of ideas with the major players on the Liechtenstein financial market our research projects are mainly based on current and future relevant fields for local companies. To this end, we offer core electives courses and projects on currently researched topics. Graduates of this programme will profit from a high employability in the region but also worldwide.

Within the compulsory courses, the focus is on financial risk management, asset, investment and wealth management, portfolio management, international financial management and corporate finance, financial engineering and product development.

With the provision of core electives, these qualifications will either be deepened or new fields will be introduced, thus offering students an additional qualification and employability. These qualifications are in general asked by the types of companies mentioned at the beginning of this section, as well as in the academic sector like universities. Because of the expanding importance of fintechs and crypto-related activities, of data science and machine learning and of sustainable finance and investing, such topics will be integrated in the core electives by interactive lectures and practical projects.

A voluntary exchange semester at one of the programme's high-profile international partner universities provides students with an opportunity to test their acquired knowledge in a different cultural and academic environment and offers new perspectives and personal development opportunities.

The resulting qualification programme profile leads to outstanding career opportunities for our graduates.

1.3. Entry requirements

The Master's degree programme in Finance builds upon a relevant Bachelor's programme or equivalent. Proof of sufficient language proficiency is required. For a positive admission decision, the student's portfolio as a whole will be examined. Further details can be found in our Admission Guidelines.

1.4. Learning outcomes

The Master of Science in Finance is designed such that students will acquire specific professional knowledge and understanding, generic cognitive skills, communication and learning strategies.

Knowledge and understanding

- Based on the knowledge and understanding gained in the undergraduate programme, graduates demonstrate knowledge which covers and integrates the main features, boundaries, terminology and conventions of the field of finance.
- Graduates show a critical understanding of the intellectual and ethical content of selected financial structures in order to substantiate appropriate judgements.
- Graduates provide a basis for originality in developing their own research ideas in the field of finance.

Applied knowledge and understanding

- Graduates show problem-solving abilities in the field of finance for new or unfamiliar environments within broader (or multidisciplinary) contexts.
- Graduates recognise and understand the process of digitalization in finance and are able to transform and apply the implications of digitalization to financial problems.
- Graduates conduct a complex research, development or investigation project and identify and implement relevant outcomes.
- Graduates provide a basis for originality in applying appropriate methodologies in research projects in finance.

Assessment and judgement

- Graduates apply critical analysis, evaluation and synthesis to issues which are at the forefront of finance.
- Graduates deal with complex issues in the field of finance and make informed judgements in situations where information is incomplete or inconsistent.
- Graduates reflect social and ethical aspects of their decisions when applying their knowledge and understanding in given financial problems.

Communication

- Graduates communicate research results at an expert level in a variety of roles and contexts and can deliver professional presentations to representatives from practice and research.
- Graduates use appropriate methods to communicate to a range of audiences with different levels of knowledge and expertise.

Learning strategies

- Graduates exercise autonomy and initiative in carrying out the self-directed programme of study or research projects.
- Graduates demonstrate capacity to manage time and physical resources as an individual and as a group member and to collaborate with peers and others in sharing knowledge and research.

1.5. Programme structure

The Master's degree programme in Finance is arranged in a modular structure and is characterised by both its academic rigor and practical orientation. This programme comprises four semesters of full-time study corresponding to 120 ECTS (European Credit Transfer System). The curriculum was developed based on a comparative analysis of the curricula of top universities, having in mind our niche orientation regarding asset and risk management as well as international finance.

In the first semester, courses in research methodologies and (based on the knowledge acquired in an undergraduate programme) advanced concepts in finance are offered. The second semester concentrates on risk management and asset management concepts. It also includes the majority of core electives. The third semester offers advanced concepts on investments. In the fourth semester, students write, present and defend their thesis.

Table 1 provides an overview.

Table 1: General Programme Structure

Semes-ter	Module Title	ECTS
1	Financial Economics and Markets	6
	Quantitative Methods	6
	Research Methods in Finance	6
	Effective Communication	3
	International Business Finance	3
	Seminar in Applied Finance	3
	Cross Electives	3
Total first-semester ECTS credits		30
2	Risk Management and Financial Derivatives	6
	Empirical Asset Pricing	6
	Project in Finance	3
	Core Electives	15
Total second-semester ECTS credits		30
3	Corporate Governance and Ethics	6
	Investment Strategies and Asset Management	6
	Pension Finance	3
	Research Greenhouse	3
	Corporate Finance	3
	Cross Electives	9
Total third-semester ECTS credits		30
4	Master's Thesis	27
	Core Electives	3
Total fourth-semester ECTS credits		30
1-4	Total ECTS	120

Core Electives

Within the curriculum of 120 ECTS, Core Electives form a basket of 18 ECTS. Core electives are electives offered within the current research fields of the institute of finance, e.g. Innovative and Crypto Finance, Sustainable Finance, Data Science and Machine Learning, International Taxation and International Law in Wealth Management. Fields offered are subject to availability of faculty members and a minimum number of participants per course (7 students). Courses could also be offered by visiting lecturers. Each core elective course counts for 3 ECTS. To achieve an attractive diversity, it is planned to offer 10 courses per year, although theoretically six would be sufficient.

These courses are offered in the summer semester and according to the study plan, students will attend five courses in the second semester and one course in the fourth semester. Core electives will be offered within the summer semester, courses "1" in the first half, courses "2" in the second half. This structure is chosen to allow offering an introduction into a field (level 1) in the first half of the semester and a more specialized course (level 2) in the second half of the semester. Level 2 courses can only be attended after having successfully passed level 1 course.

Table 2 shows the structure of offered courses.

Table 2: Core Elective Courses (subject to availability and student enrolment)

Field	Lecture Title	ECTS
Summer Semester, first half	Core Elective Field 1	3
	Core Elective Field 2	3
	Core Elective Field 3	3
	Core Elective Field 4	3
	Core Elective Field 5	3

Summer Semester, second half	Core Elective Field 1	3
	Core Elective Field 2	3
	Core Elective Field 3	3
	Core Elective Field 4	3
	Core Elective Field 5	3

Cross Electives (12 ECTS)

Students have the opportunity to choose courses from three additional baskets to fill the quantity of 12 ECTS. All courses offered are based on 3 ECTS.

- **Finance Related Electives** (3-6 ECTS) consist of additional course offers with topics in finance, offered by the Institute for Finance or from visiting guest lecturers. A minimum of 3 to a maximum 6 ECTS can be chosen from this basket. Within the realms of possibility are courses like Educational Journey, MasterLAB, CFA Research Challenge, Philanthropy and Ethics, Special Topics in Finance, Current Developments in Banking, Simulation Game (in Banking, in Portfolio Management) etc. Finance Related Electives could also be substituted by additional core elective courses.
- **Cross-Programme Electives** (0-3 ECTS) are courses from all Master's programmes in Business Economics, which have been opened for students from another programme. This could be chosen with a maximum of 3 ECTS.
- **Cross-Faculty Electives** (6-9 ECTS) are courses on business skills, personal development and humanities. They have to be chosen with a minimum of 6 and a maximum of 9 ECTS.

Table 3: Cross Electives Overview (subject to availability and student enrolment)

Field	Lecture Title	ECTS
Finance Related Electives (3 to max. 6 ECTS)	Finance Related Elective 1	3
	Finance Related Elective 2	3
	Finance Related Elective 3	3
	Finance Related Elective 4	3
	Finance Related Elective 5	3
Cross-Programme Electives (max. 3 ECTS)	Course of MSc in Entrepreneurship	3
	Course of MSc in Information Systems	3
Cross-Faculty Electives (6 to max. 9 ECTS)	Variety of course offers per semester	3

Voluntary Semester Abroad (30 ECTS)

The third semester could be used for an exchange semester at one of our partner universities across the globe.

Extra-Curricular Events will complement this study programme (like language courses, "After Work Lectures on Asset and Investment Management", conferences, workshops and courses offered by the Institute for Finance and other Institutes.).

2. Formal aspects of the programme

The programme corresponds to Qualification Level 2 of the Bologna Programme and to Qualification Level 7 of the “European Qualifications Framework for Lifelong Learning” developed by the European Union. Table 4 provides an overview of the programme’s formal aspects.

Table 4: Formal aspects

Official Title	Master’s Programme in Finance
Duration and Workload	4 semesters full-time study, 120 ECTS credits
Language	English
Credits	Courses are assigned a certain number of hours in class and a number of hours for individual coursework; the sum of both yields the actual workload. 30 work hours are equivalent to 1 ECTS credit point. 30 ECTS credit points correspond to the average coursework of a semester at the University of Liechtenstein.
Academic Degree	Master of Science in Finance
Official Abbreviation	MSc
Admission Requirements	Admission requirements are specified in the Admission Guidelines for the Master’s degree programme in Finance.
Further Educational Options	The degree grants eligibility for a doctoral degree programme (inside and outside of Liechtenstein).

3. Module structure

The following tables list all modules and lectures, specified by additional formal information.

Legend:

CO – compulsory

OC – optional compulsory

LE – lecture

SE – seminar

TH – thesis project

PD – thesis presentation and defence

EX – exercise

EXC - excursion

The module structure of the first semester intends to bring all the participants on a similar level in Finance. In addition, this semester provides the methodological basis required for a research-oriented master’s degree in finance. This semester lays the basis for an improvement of written and verbal communication skills.

Table 5 outlines the first semester modules and courses.

Table 5: First Semester Module Structure

Module Course(s) within the module	Type	Class hours/week (in units of 45 minutes)	ECTS
Effective Communication	CO		3
Effective Communication	EX	2	3
Financial Economics and Markets	CO		6
Financial Economics	LE	1.75	3
Financial Markets	LE	1.75	3
International Business Finance	CO		3
International Business Finance	LE	1.75	3
Research Methods in Finance	CO		6
Scientific Writing	LE	1	1
Empirical Methods	EX	1.75	3
Qualitative Methods	LE	1.25	2
Seminar in Applied Finance	CO		3
Seminar in Applied Finance	SE	1.75	3
Quantitative Methods	CO		6
Statistics	EX	3	4
Econometrics	LE	1.25	2
Cross Electives	OC		3
<i>Subject 1</i>	<i>LE/EX</i>		3

The second semester offers compulsory courses on risk management as well as asset pricing and portfolio theory. Project in Finance is a project, either in the form of a MasterLAB or as a Seminar. The second semester contains five courses of Core Electives (15 ECTS), representing specialisations of courses from the first semester and special research fields of faculty members. They are subject to availability and enrolment of students.

Table 6: Second Semester Module Structure

Module Course(s) within the module	Type	Class hours/week (in units of 45 minutes)	ECTS
Core Electives	OC		15
<i>Subject 1, 2, 3, 4, 5</i>	<i>LE/EX</i>	<i>1.75</i>	<i>3</i>
Empirical Asset Pricing	CO		6
Empirical Asset Pricing	LE	2.5	4
Applied Portfolio Management	EX	2	2
Project in Finance	OC		3
<i>Seminar in Finance</i> <i>or</i> <i>MasterLAB</i>	SE	1.75	3
Risk Management and Financial Derivatives	CO		6
Financial Derivatives	LE	1.75	3
Risk Management	LE	1.75	3

Basic topics of the third semester are (corporate) finance and investments as well as corporate governance and ethics. Research Greenhouse is a module in which students develop independently their own research project for their master's thesis. Cross Electives are offered, as an example the Educational Journey to an international financial hub.

Table 7: Third Semester Module Structure

Module Course(s) within the module	Type	Class hours/week (in units of 45 minutes)	ECTS
Corporate Finance	CO		3
Corporate Finance	EX	2	3
Corporate Governance and Ethics	CO		6
Corporate Governance	LE	1.75	3
Ethics	LE	1.75	3
Investment Strategies and Asset Management	CO		6
Investment Strategies and Asset Management	EX	2	3
Alternative Investments	LE	1.75	3
Pension Finance	CO		3
Pension Finance	LE	1.75	3
Research Greenhouse	CO		3
Research Greenhouse	SE	2	3
Cross Electives	OC		9
<i>Subject 1, 2, 3</i>	<i>EXC/LE/EX</i>		3

The fourth semester comprises the Thesis Project, which ultimately has to be presented and defended in front of the presentation and defence examination board. Additionally, the sixth course on core electives is planned for the fourth semester.

Table 8: Fourth Semester Module Structure

Module Course(s) within the module	Type	Class hours/week (in units of 45 minutes)	ECTS
Core Elective	OC		3
<i>Subject 6</i>	<i>LE/EX</i>	<i>1.75</i>	3
Master's Thesis	CO		27
Thesis Project	TH		26
Presentation & Defence	PD	1	1

4. Module handbook

The current module descriptions are accessible via the university intranet.