



FACTSHEET | STUDY PROGRAMME

Master in Finance MSc



Course of studies 120 ECTS programme

YEAR 1					YEAR 2	
Fall Term		Spring Term			Fall Term	Spring Term
Period I	Period II	Period III	Period IV	Period V	Period I	Period II
Corporate Finance and Valuation Financial Statement Analysis for Security Valuation Fundamentals of Corporate Valuation Empirical Corporate Finance	Applied Valuation, Alternative Investments and Derivatives, or Managing Projects Applied Corporate Valuation Alternative Investments and Derivatives or Megaprojects – Finance, Risk & Society	Financial Modelling, Accounting M&A & IFRS, or Economics of Financial Markets and Crises Financial Modeling Accounting for M&A, Acquisitions and IFRS or Economics of Financial Markets and Crises	Empirical Finance, Financial Risk, or M&A Empirical Finance Risk Management in Financial Institutions or Mergers & Acquisitions	Select two Projects Corporate Finance Project Asset Management Project Applied Data Science Project	Choose your Track* Semester Abroad Track or Practice Track or German Track	Master's Thesis
Fundamentals of Quantitative Analysis Python Statistics Econometrics		Academic Writing and Finance Research	Essential Skills for Modern Financial Professionals & Finance & Data Projects ESG Blockchain Leadership Negotiations			

*The German Track is only available for non-German speakers. There will be compulsory, curricular German Language courses included in this Track. The courses will be taught already from the beginning of the first year.





Course of studies 60 ECTS programme

YEAR 1				
Fall Term		Spring Term		
Period I	Period II	Period III	Period IV	Period V
Corporate Finance and Valuation Financial Statement Analysis for Security Valuation Fundamentals of Corporate Valuation Empirical Corporate Finance	Applied Valuation, Alternative Investments and Derivatives, or Managing Projects Applied Corporate Valuation Alternative Investments and Derivatives or Megaprojects – Finance, Risk & Society	Financial Modelling, Accounting M&A & IFRS, or Economics of Financial Markets and Crises Financial Modeling Accounting for M&A, Acquisitions and IFRS or Economics of Financial Markets and Crises	Empirical Finance, Financial Risk, or M&A Empirical Finance Risk Management in Financial Institutions or Mergers & Acquisitions	Master's Thesis
Fundamentals of Quantitative Analysis Python Statistics Econometrics				



Overview finance modules

Corporate Finance and Valuation	Mandatory Semester 1 Fall Term	This module will teach graduates how to: ✓ Analyse financial statements, identify potential earnings management within financial statements, forecast future financial statements, use the financial statement information for firm valuation, and identify under or over-valued stocks. ✓ Independently select the relevant financial data from a wider set of data when answering questions from corporate finance practice, as well as critically evaluate the arguments presented in newspaper articles from the financial press. ✓ Independently estimate the value of a company, deciding on the most appropriate data and methods to use when examining the robustness and sensitivity of the calculated value. ✓ Expand their leadership abilities by becoming able to identify business opportunities in both financial and real markets, understanding the limitations created by uncertainties in the business environments and scientific methods, and becoming more sensitive to ethical dilemmas inherent in many business opportunities.
Applied Valuation, Alternative Investments and Derivatives, or Managing Projects	Mandatory Semester 1 Fall Term	This model is designed to extend and broaden intermediate knowledge in Finance. It covers several knowledge areas in which post-graduate students in Finance should become proficient. ✓ The first course, Applied Corporate Valuation, is based on the annual global research challenge of the Chartered Financial Analyst (CFA) Institute. Students apply valuation techniques to a real-world firm and write a professional research report which justifies their buy or sell recommendation. Finally, they present their work to industry professionals in a competitive framework. ✓ The second course, Alternative Investment and Derivatives, is an advanced finance course consisting of two parts. In the first part (Alternative Investment), non-core areas in finance are covered, ranging from hedge funds and private equity venture capital to commodities, infrastructure, and farmland. The second part (Derivatives) introduces derivatives and general principles of risk-neutral pricing as well as their markets. Some focus on pricing derivatives based on stochastic processes over a continuous period of time. ✓ The third course in this module (Megaprojects – Finance, Risk & Society) educates about the techno-economic phenomena of megaprojects and their impact on and relation to business and wider society. The course



trains students to master complexity in the development and successful execution of projects.

Fundamentals of Quantitative Analysis	Mandatory Semester 1 Fall Term	This module familiarizes the students with the fundamental concepts required for conducting quantitative analyses and develops the quantitative skills of participants from theoretical and empirical perspectives.
Financial Modelling, Accounting for M&A and IFRS, or Economics of Financial Markets and Crises	Mandatory and Elective Semester 2 Spring Term	This module consists of the compulsory component and the elective component. / In the mandatory course Financial Modelling, students use EXCEL to gain advanced and applied knowledge in Finance. Therefore, they repeat, apply, and strongly extend their knowledge of finance during their master's studies. / Elective Course Accounting for Mergers & Acquisitions and IFRS provides students with a comprehensive overview of accounting and modelling for mergers and acquisitions (M&As) as well as selected topics in financial reporting according to IFRS. / Elective Course Economics of Financial Markets and Crises deepens students' understanding of financial markets and their paramount role within market economies and the macroeconomic environment. Recurrent features of financial crises of financial markets are analysed.
Empirical Finance, Financial Risk, or Mergers & Acquisitions	Mandatory and Elective Semester 2 Spring Term	This module consists of the compulsory component and the elective component. The compulsory component is Empirical Finance. For the elective part, the students choose either courses Risk Management in Financial Institutions or Mergers & Acquisitions.
Essential Skills for Modern Financial Professionals and Finance and Projects	Mandatory and Elective Semester 2 Spring Term	The module consists of one 3 ECTS obligatory course that covers a range of topics, including ESG (environmental, social, and governance) principles, leadership and management techniques, blockchain technology, and effective negotiation strategies. Students will learn how to apply them in real-world situations, enabling them to effectively support the financial goals of their organizations and drive positive change. In addition, students need to elect and participate in two out of three available applied courses that will be executed jointly with selected corporate partners: / Asset Management Project / Corporate Finance Project / Applied Data Science Project



Module descriptions

Module	Course	ECTS	Elective Mandatory	Module Content
Corporate Finance and Valuation	Complete Module	9	Mandatory Fall Term	This module will teach graduates how to: ✓ Analyze financial statements, identify potential earnings management within financial statements, forecast future financial statements, use the financial statement information for firm valuation, and identify under or over-valued stocks. You will be exposed to analytical frameworks, academic research, and practical tools to improve your ability to analyze financial statements and value firms and identify potentially mispriced stocks. ✓ Critically analyze the main theories, principles, and methods of corporate finance and apply them to real-world problems. ✓ Independently select the relevant financial data from a wider set of data when answering questions from corporate finance practice, as well as critically evaluate the arguments presented in newspaper articles from the financial press. ✓ Independently estimate the value of a company, deciding on the most appropriate data and methods to use when examining the robustness and sensitivity of the calculated value. ✓ Expand their leadership abilities by becoming able to identify business opportunities in both financial and real markets, understanding the limitations created by uncertainties in the business environments and scientific methods, and becoming more sensitive to ethical dilemmas inherent in many business opportunities.
	Financial Statement Analysis for Security Valuation	2	Mandatory	The course turns to financial information to understand the operational and financial workings of a company. However, uncovering and translating this information into actionable insights is not always straightforward or easy. To help students acquire such knowledge and skills, the



course is organized in five parts focusing on the five key steps in Financial Statement Analysis.

1. Business Analysis
2. Accounting Analysis
3. Financial Ratio Analysis
4. Forecasting
5. Valuation

Graduates need to understand the business environment and company-reported accounting information, apply tools for adjusting and assessing financial statement information for profitability and credit risk analysis, and translate knowledge of the business environment and company's current status to form predictions about future financial performance and conditions. They then apply the forecasted information in a valuation model as well as in quantitative investment strategies. This course consists of a series of class exercises and a practical case study.

Empirical
Corporate
Finance

3

Mandatory

Given a firm's present portfolio of real assets and its future investment strategy, the course provides students with the tools to ascertain the best financing strategy. It addresses specific concepts, techniques, instruments, and institutions involved in financing investment. The course starts with a brief review of the fundamental ideas that relate to the concepts of value and risk, the net present value and the capital asset pricing model. It then explains and discusses the important insight of market efficiency and addresses different financing options specific to each life stage of the firm. It concludes by discussing the principal terminology and concepts related to mergers, acquisitions, and company restructuring. Throughout the course, students will get a chance to critically evaluate articles from the financial press related to the topics studied. There is one session on Standards of Practice (Ethics) in line with the Chartered Financial Analyst (CFA) Curriculum.

Fundamentals
of Corporate
Valuation

3

Mandatory

The course allows students to improve their knowledge acquired in the empirical corporate finance course by analysing two real-world problems:

- / First, students will gain experience with problems one faces in calculating the WACC of a real-world company using publicly available data and valuing the same company.
- / Second, methods of project and firm valuation and their application in practice will be mastered. Students will learn how to determine the relevant



cash flows and match them with the appropriate discount rate. Concepts of free cash flows, WACC, adjusted present value, and real options will be mastered. They would all finally be applied to valuing a real-world company.

The course consists of a combination of lectures, case studies, and tutorials on using spreadsheet software for calculating the WACC and valuing a real company.

Applied Valuation, Alternative Investments and Derivatives, or Managing Projects	Complete Module	9	Mandatory and Elective 2 of 3 Fall Term	This model is designed to extend and broaden intermediate knowledge in Finance. It covers several knowledge areas in which post-graduate students in Finance should become proficient. ✓ The first course, Applied Corporate Valuation, is based on the annual global research challenge of the Chartered Financial Analyst (CFA) Institute. Students apply valuation techniques to a real-world firm and write a professional research report which justifies their buy or sell recommendation. Finally, they present their work to industry professionals in a competitive framework. ✓ The second course, Alternative Investment and Derivatives, is an advanced finance course consisting of two parts. In the first part (Alternative Investment), non-core areas in finance are covered, ranging from hedge funds and private equity venture capital to commodities, infrastructure, and farmland. The second part (Derivatives) introduces derivatives and general principles of risk-neutral pricing as well as their markets. Some focus on pricing derivatives based on stochastic processes over a continuous period of time. ✓ The third course in this module (Megaprojects – Finance, Risk & Society) educates about the techno-economic phenomena of megaprojects and their impact on and relation to business and wider society. The course trains students to master complexity in the development and successful execution of projects.
Choose 2 out of 3 Courses				
	Applied Corporate Valuation	9	Mandatory	The CFA Institute (Chartered Financial Analyst Institute) annually organizes a global competition (CFA Research Challenge). Student teams assume the role of a research analyst and prepare a research report/company valuation of a real-world company. This includes a final buy or sell recommendation. Each team is tested on their analytical, valuation, report writing, and presentation skills. The student team also presents their results to a panel of professional analysts. Therefore, the CFA



Research Challenge provides hands-on mentoring and intensive training in financial analysis.

EBS belongs to the selected universities globally that are programme partners of the CFA Institute. regularly participates in the CFA Research Challenge. Five selected students will represent EBS in the challenge.

Student teams have to prepare a research report on a real-world company based on "golden" CFA standards. The course includes lectures, mentoring and a final presentation with feedback.

Alternative
Investment &
Derivatives

6

Elective

The CFA Institute (Chartered Financial Analyst Institute) annually organizes a global competition (CFA Research Challenge). Student teams assume the role of a research analyst and prepare a research report/company valuation of a real-world company. This includes a final buy or sell recommendation. Each team is tested on their analytical, valuation, report writing, and presentation skills. The student team also presents their results to a panel of professional analysts. Therefore, the CFA Research Challenge provides hands-on mentoring and intensive training in financial analysis.

EBS belongs to the selected universities globally that are programme partners of the CFA Institute. regularly participates in the CFA Research Challenge. Five selected students will represent EBS in the challenge.

Student teams have to prepare a research report on a real-world company based on "golden" CFA standards. The course includes lectures, mentoring and a final presentation with feedback.

Investments courses include Quantitative methods for investing, asset allocation including alternative investments, hedge funds and managed futures, commodities and commodity futures, Real Estate, Infrastructure/farmland/timber, PE / VC, IP / media, Factor and ESG investing, Shipping, containers, solar, wind, etc.

Derivatives:

The aim of this course is to give an overview of derivatives markets and to illustrate basic methods of derivatives pricing. The course starts with the mechanics of derivatives markets and introduces forwards and futures and the application of these instruments in hedging. The no-arbitrage argument is used to derive prices of the most important types of forwards and futures. The course continues with options, their properties, trading strategies involving options, and a brief overview of exotic options. These topics are followed by interest-rate



derivatives, CDSs, commodity, energy, and weather derivatives.

The second part of the course introduces stochastic processes used for asset price modelling, Itô's lemma, and general principles of risk-neutral pricing in continuous time and its relationship with the no-arbitrage principle.

The course concludes with the most important numerical methods used in derivatives pricing, with an emphasis on Monte Carlo simulations.

Megaprojects – 6
Finance, Risk &
Society

Elective

The aim of the course is to educate about the techno-economic phenomena of megaprojects and the impact and relation they have towards business and wider society. The aspects of Megaprojects the course will cover are, among others, History and paradox, growth effects, environmental impacts and unintended consequences, approaches to megaproject development with the involvement of private capital, Megaprojects in geopolitics, project finance and financing institutions, Cost/Benefit Analysis, Project Management, and Risk Management.

The purposes of this course are:

- / To illustrate the complexity in the development and successful execution of megaprojects, point out the common failure and their reasons, and examine the rationale behind them and their benefits.
- / To provide students with tools and methods for understanding the challenges, risks, and opportunities of Megaprojects to be able to critically evaluate them and have a fundamental knowledge of how to lead and manage them.

**Fundamentals of
Quantitative Analysis**

Complete
Module

9

Mandatory
Fall Term

This module familiarizes the students with the fundamental concepts required for conducting quantitative analyses and develops the quantitative skills of participants from theoretical and empirical perspectives.

Statistics

3

Mandatory

This course makes the students familiar with the fundamental concepts of probability theory and statistics. The course starts with introducing probability spaces and elementary calculus with probabilities. It then discusses univariate and multivariate random variables and focuses on their properties and representations. Discussions like marginal and conditional distributions will be discussed when introducing multivariate random variables. Mathematical expectation and its conditional version will then be used to discuss how to model and



uncover the so-called “average dependencies” among different random variables. Classical Law of Large Numbers and Central Limit Theorem will then be discussed to prepare the course participants to conduct simple inference tasks focusing on point estimation as well as confidence sets. This course covers probability spaces, random variables, expectation operators, estimation, the law of large numbers, the central limit theorem, sampling distribution, and hypothesis testing.

Python	3	Mandatory	The main purpose of this course is to make the student familiar with basic concepts of programming in Python, the most important language used now by data scientists. This prepares the student for further courses, in particular, Econometrics, Data Science and Machine Learning. The topics introduced are, among others, basic elements of a programming language, modularization via functions, Boolean if-else logic and flow control via for- or while-loops, data types, object orientation, data mining with APIs (e.g., Google Maps API), Visualisation & Optimisation tools.
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Econometrics	3	Mandatory	This course introduces the classical econometric tools used in the analysis of financial data. The lectures start with a discussion of regression analysis techniques, which are also applied to different financial series and questions. The methods conventionally used to analyze dynamic systems are introduced and applied to different financial and economic systems. Forecasting financial series will also comprise an important part of the lecture, where the limitations and the merits of widely used forecasting models will be highlighted. Furthermore, the course will cover models for estimating and forecasting volatility and discuss how volatility can be used as a generic measure of risk. Nonstationary models for time series are the next topic covered. Finally, the course will turn to CAPM and test its implications empirically. All the empirical examples will be carried out using Python. The course takes the form of interactive lectures. Students will learn to empirically implement theoretical models and test them on real-world data using Python. The topics covered in this course are, among others, Regression analysis, Time series models and forecasting, and Nonstationary models.
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Financial Modelling, Accounting for M&A & IFRS,	Complete Module	9	Mandatory and Elective 2 of 3	In the mandatory course, Financial Modelling, students use EXCEL to gain advanced and applied knowledge in
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or	Spring Term				Finance. Thereby they repeat, apply, and strongly extend their knowledge in Finance during their master studies. The elective course Accounting for Mergers & Acquisitions and IFRS provides students with a comprehensive overview of accounting and modelling for mergers and acquisitions (M&As) as well as selected topics in financial reporting according to IFRS. The elective course Economics of Financial Markets and Crises deepens students' understanding of financial markets and their paramount role within market economies and the macroeconomic environment. Recurrent features of financial crises of financial markets are analysed.
Economics of Financial Markets and Crises					
Choose 1 out of 2 Elective Courses					
	Financial Modeling	3	Mandatory	The course introduces advanced tools in Excel that are necessary for financial modelling. We start with very basic calculations and move step by step to more sophisticated applications. The course covers topics like simulations, matrix calculations, and multivariate regression analysis and applies them to asset pricing, portfolio management, Value-at-Risk analysis, and derivatives. We use a "hands-on" approach. The underlying financial theories will be repeated.	
	Accounting for Mergers & Acquisitions and IFRS	6	Elective	The purpose of this course is to provide a comprehensive overview of accounting and modelling for mergers and acquisitions (M&As). Students will learn to prepare financial statements for business combinations at the time of an acquisition and to prepare financial statements for consolidated entities after an acquisition. The course is recommended for students who, in their careers, anticipate that they will be required either to prepare proforma consolidated statements for prospective acquisitions or analyse the consolidated statements of existing complex financial structures. Selected topics in financial reporting according to IFRS are also discussed. These topics include foreign currency transactions, hedging, special purpose entities (SPEs), earnings management, and KPIs. The course is useful for those who wish to prepare for the CFA exams, especially the "Financial Statement Analysis" area. After completing this course, students will be able to prepare, understand and analyse consolidated financial statements and trained to understand the operational and strategic implications of different financial structures created from consolidation activity.	
	Economics of Financial Markets and Crises		Elective	✓	Financial Markets: The course deepens students' understanding of financial markets and their paramount role within market economies. It, therefore, explicitly relates the financial market and



its institutions to the macroeconomic environment. The first part of the course reviews the key economic issues of financial markets. A particular focus is put on the role of central banks aiming to stabilise financial markets and the design of monetary policy. The second part of the course examines international finance and international transactions, including the foreign exchange market and the international financial system, including its institutions and exchange rate regimes.

- ✓ The Financial Crises course examines the causes and consequences of financial crises using the modern tools of macroeconomic and international financial theory, which are recurrent features of financial markets. While each crisis might appear unique, they are usually the result of bubbles in a certain class of assets. Moreover, they are mostly related to a specific kind of financial innovation. The course deepens students' understanding of financial markets, their paramount role within market economies, and the decisions corporate managers need to make during periods of financial crises. It, therefore, explicitly relates the financial market and its institutions to the macroeconomic environment.

Empirical Finance, Financial Risk, or Mergers and Acquisitions Choose 1 out of 2 Elective Courses	Complete Module	9	Mandatory and Elective 1 of 2 Spring Term	This module consists of the compulsory component and the elective component. The compulsory component is Empirical Finance. For the elective part, the students choose either courses Risk Management in Financial Institutions or Mergers & Acquisitions.
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Empirical Finance	3	Mandatory	The mandatory Empirical Finance course introduces the main techniques in empirical finance. The course familiarizes students with quantitative, econometric, and multivariate methods as well as their applications in the area of finance. Lectures cover topics such as distributional properties (autocorrelation, normality, etc.) of stock index returns and tests on weak-form market efficiency. Subsequently, advanced portfolio optimisation techniques, as well as traditional asset pricing and multi-factor models (e.g., CAPM and Fama-French approach), are discussed. All of the empirical analyses are done using Python.
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Risk Management in	6	Elective	The elective course Risk Management in Financial Institutions focuses on the financial management and regulation of financial institutions. Students should be
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Financial Institutions				able to comprehend the various forms of risks faced by financial institutions and the trade-offs required in order to balance risks and returns. The focus will be on, among others, the modern techniques of asset, liability, and risk management, financial markets and trading, with an emphasis on the regulatory issues of capital adequacy and risk-shifting as they affect the safety and soundness of the financial system. By the end of this term, students are expected to be fluent in all major sources and kinds of risks faced by larger financial institutions.
Mergers & Acquisitions	6	Elective		The elective course Mergers & Acquisitions (M & A) addresses the financial, organizational, and legal aspects of M&A transactions. The objective is to enable non-law students to assess and deal with M&A-based legal problems in practice. The M & A process is examined, and the difficult assessment of firm evaluation is studied. Differences between the value of control and the value of synergy are discussed, and how these two constructs are estimated. Real-life project is used to integrate the knowledge gained about both legal and financial aspects of the M&A process.
Essential skills for Modern Financial Professionals and Finance, and Finance and Data Projects	Complete Module	15	Mandatory and Elective 2 of 3 Spring Term	This module is designed to help future finance professionals develop the essential skills needed to succeed in today's business environment. In addition, students need to elect and participate in two out of three available applied courses that will be executed jointly with selected corporate partners.
Choose 2 out of 3 Elective Courses				
Key Skills for a Modern Financial Professional	3	Mandatory		The module consists of one 3 ECTS obligatory course that covers a range of topics, including ESG (environmental, social, and governance) principles, leadership and management techniques, blockchain technology, and effective negotiation strategies. Participants will gain a deep understanding of these key areas and learn how to apply them in real-world situations, enabling them to effectively support the financial goals of their organizations and drive positive change.
Asset Management Project	6	Elective		Asset Management Project course is designed to provide students with the skills and knowledge they need to evaluate the performance of trading strategies using statistical methods. Over the course of the module, students will learn about predictive regressions, Fama and Macbeth regressions, and Fama-French regressions and will have the opportunity to apply these methods to a variety of real-world data sets. These tools are



important because they provide analysts with a way to understand and predict the behavior of financial assets and they dominate the practice of asset management companies. Students will also need to learn how to use the Bloomberg terminal, a powerful tool used by finance professionals to access real-time financial data, conduct analysis, and make informed decisions. By the end of the course, you have to pass the Bloomberg Concepts certificate programme.

Corporate
Finance Project

6

Elective

In this course, we will use classical as well as the most recent financial theory to solve real-world problem sets faced by financial service firms like consultants, investment and commercial banks, finance departments of firms, etc. The course uses an applied, hands-on approach. Topics can be from all areas of corporate finance, such as M&A, restructuring, financial risk management, and securitisation. The course will be delivered in cooperation with reputable corporate partners that ideally provide cases reflecting their project work and will cover the best industry standards.

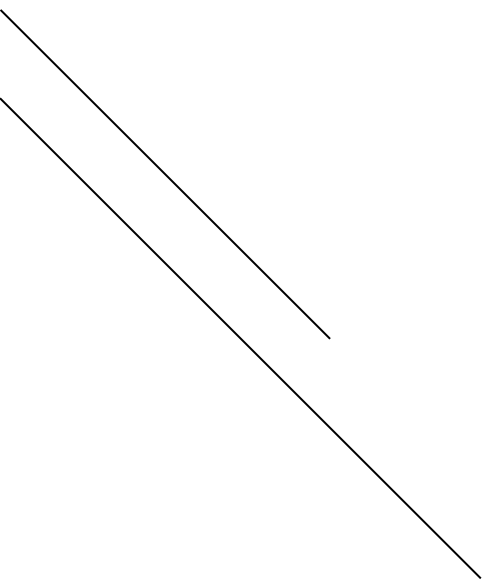
Applied Data
Science Project

6

Elective

In this course, you will learn how to use data to deliver business insights through analytics. The primary focus is on the application of various techniques across business disciplines. Students will develop a deep understanding of the methodological toolbox that can unlock the value inherent in data. Students will engage in a data challenge in which they get a direct opportunity to create social and business value for the partners of a hackathon by leveraging and applying their business and technical skills for real-world applications. Their knowledge of analytics and cognitive computing should enable them to support organisations in major changes. The Applied Data Science Project course is designed to provide students with hands-on experience applying data science techniques to real-world problems. Through a combination of lectures, discussions, and individual and group projects, students will learn how to collect, analyse, and interpret data to identify patterns, trends, and insights that can inform decision-making and drive business success.

Notice: Please note that the names and content of the modules described in this factsheet are subject to updates and modifications at the discretion of the university.



WE ARE HERE FOR YOU

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