



Academic Catalog and Student Handbook

January 1, 2025 – December 31, 2025

Amended: March 14, 2025

609 H Street NE, Suite 335
Washington, DC 20002

+1(202) 556-3402 • wqu.edu

List of Catalog Amendments as of March 14, 2025

The following amendments were made to the WorldQuant University Catalog after its publication in January 2025, for the academic year 2025.

- **Page 1, 16 and 19:** Updated the WQU mailing address as follows:

WorldQuant University
609 H Street NE, Suite 335
Washington, DC 20002
USA

- **Page 14:** Updated the State Licensure. As of February 28, 2025 WorldQuant University is authorized to grant degrees by the Washington, DC Higher Education Licensure Commission (HELC) of the Office of the State Superintendent of Education (OSSE).
- **Page 44:** Updated the grievance procedure to direct students to file a possible complaint with the Washington, DC Higher Education Licensure Commission (HELC).

Board of Directors

John Endrud

Chief Executive Officer
WorldQuant University

Igor Tulchinsky

Founder and CEO
WorldQuant, LLC

Jeffrey Blomberg

Chief Administrative Officer and General Counsel
WorldQuant, LLC

Jonathan Marom

Chief Financial Officer
WorldQuant, LLC

Administration

John Endrud

Chief Executive Officer

Daphne Kis

President

Gabriella Maiello, PhD

Academic Dean

Anne Elbert

Program Director

Gregory Ciresi

Curriculum Engineer

Kasarah Swart-Kaushal

Student Success Manager

Meikel Varvaro

Registrar

Isaac Suggitt

Executive Coordinator

Jennifer Tomlinson

Admissions Support Coordinator

Kevona Jones

Admissions Support Coordinator

Instructional Team

Kenneth Abbott

MSc, Statistics and Operations Research - Stern School of Business (NYU), New York, NY - 1994
MA, Economics - New York University (NYU), New York, NY - 1991
BA, Economics - Harvard University, Cambridge, MA - 1983

Sheldon Allen

MSc, Financial Engineering – Columbia University, New York, NY – 2022

Ritabrata Bhattacharyya

MSc, Engineering and Computational Biology - Indian Institute of Technology, Bombay, India - 2004

Ivan Blanco, PhD

PhD, Finance and Quantitative Methods – University Carlos III, Madrid, Spain - 2016
MSc, Finance and Quantitative Methods - University Carlos III, Madrid, Spain - 2012
MBA, EOI & EM - Lyon Business School, Madrid (Spain) and Lyon (France) – 2008
B.S, M.S Aerospace Engineering - Universidad Politécnica Madrid, Spain - 2006

Joe Byers, PhD

PhD, Finance – Oklahoma State University, Stillwater, OK - 2004
MBA, Emphasis: Finance - Fort Hays State University, Hays, KS – 1995
BSc, Mathematics - Fort Hays State University, Hays, KS – 1987

Gregory Ciresi

MSc, Mathematics in Finance - Courant Institute, New York University, New York, NY - 2004
BSc, Physics - Drew University, Madison, NJ – 1991

Sergio Garcia, PhD

PhD, Finance – University Carlos III, Madrid, Spain - 2016
MSc, Finance - University Carlos III, Madrid, Spain - 2012
BBA - University of Cantabria, Santander, Spain – 2011

Yawo M. Kobara, PhD

PhD, Statistics - Western University, London, Ontario, Canada - 2022
MSc, Financial Engineering – WorldQuant University, New Orleans, LA - 2021
MSc, Mathematical Sciences – African Institute for Mathematical Sciences (AIMS), Senegal – 2017
BSc Statistics - University for Development Studies, Navrongo, Ghana - 2015

Kristos Koutkos

MSc, Financial Engineering – WorldQuant University, New Orleans, LA – 2022
MSc, Mathematics – Hellenic Open University, Patra, Greece – 2018
BSc, Mathematics – Aristotle University of Thessaloniki, Thessaloniki, Greece - 2007

Darell Moodley, PhD

PhD, Mathematics – University of KwaZulu-Natal, Durban, South Africa - 2015

MSc Mathematics – University of KwaZulu-Natal, Durban, South Africa - 2010

BSc Honors Statistics - University of KwaZulu-Natal, Durban, South Africa – 2004

BSc Applied Mathematics & Statistics - University of KwaZulu-Natal, Durban, South Africa - 2003

Michael Olafusi

MSc Financial Engineering – WorldQuant University, New Orleans, LA - 2021

MBA - University of Nicosia, Cyprus – 2019

BS Electrical and Electronics Engineering - Federal University of Technology, Akure, Nigeria - 2009

Tiberiu Stoica, PhD

PhD, Finance, Macroeconomics - Bucharest Academy of Economic Studies, Bucharest, Romania - 2012

BA, Finance - Bucharest Academy of Economic Studies, Bucharest, Romania - 2008

BSc, Mathematics - Tudor Vianu National College of Computer Science, Bucharest, Romania - 2004

Maurizio Tiso, PhD

PhD, Statistics (Minor Mathematics) - University of Minnesota, Twin Cities, MN - 1999

MSc Statistics - University of Minnesota, Twin Cities, MN - 1996

BSc, Economics and Business – Universita' Ca' Foscari, Venice, Italy - 1998

Tea Toradze, PhD

PhD, Mathematics – Tbilisi State University, Tbilisi, Georgia - 2001

MSc Financial Engineering – WorldQuant University, New Orleans, LA - 2020

BSc, Mathematics - Tbilisi State University, Tbilisi, Georgia - 1997

Vincent Sheng-Han Wu

MS, Statistics - Baruch College, Zicklin School of Business, New York, NY - 2012

BA, Economics - National Taiwan University, Taiwan - 1998

Saad Zaman

MSc, Mathematics and Statistics - University of Waterloo, Waterloo, ON, Canada - 2010

BSc, Mathematics and Statistics - University of Waterloo, Waterloo, ON, Canada - 2007

Advisory Board

Linda Ban

Global C-suite Study Director
IBM Institute for Business Value

Lydia Kemunto Bosire

Founder and CEO
8B Education Investment Fund

Lenore Blum, PhD

Distinguished Career Professor of Computer Science
Carnegie Mellon University

Marc Carletti

Associated Partner
Management & Advisory Services at Superius and Equip

Michael DeAddio

Strategic Advisor, LeverData & Backstop Solutions
Former President & COO, WorldQuant LLC

Bruno Dupire PhD

Head of Quantitative Research, Bloomberg L.P.
Professor, Courant Institute, New York University

Esther Dyson

Founder, Wellville

Paul Tudor Jones

Co-Chairman and Chief Investment Officer
Tudor Investment Corporation

Ann Kirschner, PhD

Special Advisor to the President
Arizona State University

Alexander Lipton, PhD

Quantitative Research and Development and Advisor, Abu Dhabi Investment Authority (ADIA)
Connection Science Fellow, MIT Media Lab

Christopher Mason, PhD

Full Professor of Physiology, Biophysics and Computational Genomics
Weill Cornell Medical College

Mel Ochoa

Chief Operating Officer

Landmark Ventures

David Shrier, PhD

Professor of Practice, Imperial College Business School

Founder & Managing Director, Visionary Future, LLC

Susan Wolford

Board Member and Advisor

Table of Contents

Board of Directors	2
Administration.....	2
Instructional Team.....	3
Advisory Board	5
Message from the Founder	11
I. About the University.....	12
Overview.....	12
Our Mission	12
Institutional Goals.....	12
Institutional Outcomes	13
Legal Control.....	13
Accreditation.....	14
State Licensing.....	14
State Authorization	14
Catalog Disclaimer	14
Catalog Rights.....	15
Hours of Operations	15
Faculty Hours	15
Academic Calendar	15
Contact Information	16
II. Student Admissions.....	17
General Admissions Requirements	17
Admissions Requirements	17
English Language Proficiency Requirements	18
Submitting Official Transcripts.....	19
US Equivalency for Degree Programs Completed Outside of the U.S.....	19
Conditional Admission	20
Additional Considerations.....	20
Sanctioned Nations	21
Application Process and Acceptance.....	21

Student Identity Verification Policy.....	22
Transfer Credit Policy	23
Experiential Learning Credit.....	24
Accommodations for Students with Disabilities	24
III. Student Records and Privacy Policy	25
Privacy Policy and Release of Student Records.....	25
Student Record Maintenance Policy.....	26
IV. Financial Information	28
Tuition.....	28
Financial Aid	28
Refund Policy	28
V. Academic Policies.....	29
Credit Hour Policy	29
Grading Policies	30
Cumulative Average Score Calculation	31
Grading Criteria.....	31
Grading Rubrics	31
Grade Reporting	31
Grade Appeals	32
Satisfactory Academic Progress Policy.....	32
Academic Warning, Continued Warning, and Termination.....	33
Appeals and Re-Admission Policies.....	34
Appeals.....	34
Probation Status (SAP Status Appeals Only)	34
Re-Admission	34
MScFE Graduation Requirements.....	35
FFE Completion Requirements.....	35
Registration Policy.....	36
Leave of Absence Policy	36
Attendance Policy.....	36
Extension Requests	37
VI. Other Academic Policies and Regulations.....	38
Non-discrimination Policy.....	38

Academic Integrity Policy.....	38
Plagiarism and Use of Turnitin.....	39
Proper Use of Generative AI.....	40
Consequences for Violating the Academic Integrity Policy.....	40
Probation.....	40
Termination.....	40
Student Code of Conduct Policy.....	41
Actions Constituting Violation of the Student Code of Conduct Policy.....	41
Sexual and Other Harassment.....	42
Consequences for Violating the Student Code of Conduct Policy.....	43
Probation.....	43
Termination.....	43
Complaint and Grievance Policy.....	43
Complaint Procedure.....	44
Grievance Procedure.....	44
Non-retaliation Policy.....	45
Intellectual Property.....	45
Academic Freedom.....	45
VII. Learning Environment.....	47
Course Characteristics.....	47
Technology Requirements.....	48
Student Orientation Course.....	48
Online Library and Learning Resources.....	49
Student Identity Verification - Online.....	49
End-of-Course and Annual Surveys.....	49
VIII. Student Support Services.....	50
Student Support.....	50
Transcripts Request Policy.....	50
Notice on Transferability of Credits.....	50
Change of Contact Information.....	51
Career Advising.....	51
Student Email Policy.....	51
MScFE Diploma.....	52
FFE Certificate of Completion.....	52

IX. MScFE Program.....	53
Program Description.....	53
Program Outcomes	53
Program Requirements	54
Course Descriptions.....	55
MScFE 560: Financial Markets (Length: 7 Weeks)	55
MScFE 600: Financial Data (Length: 7 Weeks).....	55
MScFE 610: Financial Econometrics (Length: 7 Weeks).....	56
MScFE 620: Derivative Pricing (Length: 7 Weeks).....	56
MScFE 622: Stochastic Modeling (Length: 7 Weeks)	57
MScFE 632: Machine Learning in Finance (Length: 7 Weeks)	57
MScFE 642: Deep Learning for Finance (Length: 7 Weeks).....	57
MScFE 652: Portfolio Management (Length: 8 Weeks).....	58
MScFE 660: Risk Management (Length: 8 Weeks).....	58
MScFE 690: Capstone Course (Length: 10 Weeks)	58
Capstone Course Learning Outcomes.....	58
Capstone Project Requirements.....	59
FFE Certificate Program	60
Program Description	60
Program Outcomes	60
Appendix A – Student Journey.....	62

Message from the Founder

As the founder of WorldQuant, LLC, I have long been dedicated to developing talent for the future of the quantitative finance industry. There are many obstacles to inspiring the next generation of financial engineers and data-driven experts. WorldQuant University provides a solution to overcome these obstacles.

Location does not have to be a barrier to education.

A majority of the graduate-level programs in financial engineering limit accessibility. WorldQuant University leverages technology to break geographic barriers and offer people globally access to education and knowledge that can be used in their local markets.

Cost shouldn't be a barrier, either.

Education should be free to everyone. The most significant obstacle is the cost of education. Master's degree programs in financial engineering can cost more than \$100,000, a show-stopper for most otherwise qualified individuals to pursue education and expand their expertise. I strongly believe that individual financial resources should neither determine educational options nor limit the ability to access high-quality resources or to work with experts in the field.



These beliefs generated the idea to form WorldQuant University and provide a chance to earn a Master of Science in Financial Engineering degree without incurring student loan debt.

We encourage you to take advantage of the opportunity, to use your knowledge to advance the field, and to ultimately strive to provide someone else with a similar opportunity, continuing the talent development cycle.

– Igor Tulchinsky, Founder, WorldQuant University

I. About the University

Overview

WorldQuant University (WQU) is a not-for-profit US-based institution dedicated to advancing global education by offering instructor-guided, no cost, online programs focused on financial engineering and the data sciences to capable students across the world. Founded by Igor Tulchinsky in 2015, the first cohort of WQU students were enrolled in January 2016. After completing a rigorous evaluation process, WorldQuant University received initial accreditation from the Distance Education Accrediting Commission (DEAC) in January 2021 and received renewal of accreditation for five years in January 2024.

Recognizing that financial investing innovations are driving demand for rigorous analytic capabilities and training in the relevant industries, the University's flagship initiative focused on offering an entirely free online Master of Science in Financial Engineering (MScFE) degree program.

Financial engineering is a multidisciplinary field that combines financial theory, mathematics applications, engineering methods, and programming practices. Financial engineers apply mathematical and quantitative methods to solve financial problems.

WorldQuant University prepares capable students for sought-after positions in securities, banking, financial management, data science, and technical operational areas of corporate management. Building on this foundation, the comprehensive Program also provides students with skills needed to succeed in presenting ideas and concepts in a professional business setting. We are proud to offer:

- An exemplary online Master of Science in Financial Engineering degree program.
- A rigorous and well-balanced curriculum developed by domain experts from industry and academia.
- Skilled faculty with up-to-date professional experience.
- Eminent guest lecturers.

Our Mission

The mission of WorldQuant University is to make advanced, quality education accessible to capable students everywhere by delivering completely free online offerings.

Institutional Goals

WorldQuant University seeks to achieve its mission through the following institutional objectives:

- Provide equal access to higher education for capable students from diverse backgrounds, anywhere they live.
- Offer globally relevant, data-driven programs that address the advanced employment requirements of industry and of our students.
- Provide services and support that help students in the achievement of their goals;
- Ensure institutional stability and growth.

Institutional Outcomes

WorldQuant University seeks to achieve its goals through the following outcomes:

- Apply innovative technologies to increase accessibility from everywhere and at any time.
- Maintain tuition-free education and promote WQU to underserved populations around the world.
- Involve industry experts in shaping relevant curriculum.
- Teach using applied projects developed by practitioners and focus on global perspectives, competencies, and skills.
- Provide a stimulating online learning community that empowers students to collaborate and learn from one another as well as from industry-trained faculty and experts.
- Maintain high academic standards.
- Provide effective support services through the student lifecycle and help students to achieve learning outcomes.
- Develop partnerships with institutions and companies worldwide.

Legal Control

WorldQuant University is a not-for-profit institution overseen and led by a Board of Directors.

Accreditation

WorldQuant University is accredited by the Distance Education Accrediting Commission ([DEAC](#)). The Distance Education Accrediting Commission is listed by the U.S. Department of Education as a recognized accrediting agency and is recognized by the Council for Higher Education Accreditation ([CHEA](#)).

Contact information:

Distance Education Accrediting Commission
1101 17th Street NW, Suite 808
Washington, DC 20036
(202) 234-5100



State Licensing

WorldQuant University is authorized to grant degrees by the Washington, DC Higher Education Licensure Commission (HELC) of the Office of the State Superintendent of Education (OSSE). Any questions students or the public may have regarding the institution that have not been satisfactorily answered in this Catalog may be directed to:

Higher Education Licensure Commission (HELC)
1050 First St. NE
Washington, DC 20002
(202) 727-6436
Website: <https://helc.osse.dc.gov>



State Authorization

WorldQuant University receives degree-granting authority from the Washington, DC Higher Education Licensure Commission and is approved to participate in the National Council for State Authorization Reciprocity Agreement ([NC-SARA](#)). As an approved SARA institution, WorldQuant University enrolls students in 49 states, the District of Columbia, and US territories. The University also enrolls students in California under a legal exemption.

Catalog Disclaimer

This Academic Catalog and Student Handbook, and the policies and rules described herein, are in effect through January 1 to December 31, 2025. The Catalog provides prospective students with

comprehensive information about the University that will assist in making informed decisions for their educational goals.

Students are held to the information contained in this Catalog and are required to comply with all of the policies and regulations throughout their enrollment at the University.

This Catalog supersedes and replaces any previously published copy and is made available to the students and to the public online. Addenda to the Catalog may be released at any time during the academic year when changes are made to the academic calendar and existing policies, when new policies are adopted, or when new programs are added.

Catalog Rights

WorldQuant University reserves the right to change its educational calendar, educational programs, academic requirements, policies, and procedures at any time to improve its services to the students and the larger community. For students affected by policy or academic requirement changes, the University makes every effort to allow them to follow the regulations in effect at the time they enrolled in the Program if they maintained continuous enrollment status. The University adopts appropriate substitutions to discontinued curriculum to enable students to complete the program while meeting all requirements.

Hours of Operations

WQU administrators can be reached Monday through Friday between 9:00 am and 5:00 pm US Central Time (CT).

Faculty Hours

Faculty contact information is published in the Overview section of each course session. Additionally, faculty hold live sessions to answer questions posted in the discussion forums or posed by attending students directly via chat. All live sessions are recorded and made available to the students on the online platform.

Academic Calendar

At WorldQuant University, courses run for seven (7) or eight (8) weeks* with two (2)-week breaks between course sessions (one week for the grade finalization and one week for the course registration in the next course), and a longer break at the end of the year. The Capstone course at the end of the Program is ten (10) weeks long.

WQU accepts new students to its Master of Science in Financial Engineering program quarterly. The four start dates for the 2024 Academic Year and the related Application Deadlines are as follows:

2024 Calendar	
Start Date	Application Deadline
January 11	January 4
April 1	March 25
July 1	June 24
October 7	September 30

**The course descriptions at the end of this Catalog include the exact length of each course.*

Contact Information

WorldQuant University may be contacted using one of the following venues:

Mailing address: 609 H Street NE, Suite 335, Washington, DC 20002, USA

Phone: +1(202) 556-3402

Website: <https://www.wqu.edu/>

Admissions and Registrar's Office: admissions@wqu.edu

Help Center: <https://intercom.help/wqu/en/>

II. Student Admissions

General Admissions Requirements

WorldQuant University is committed to admitting and educating all qualified applicants who meet the admissions requirements. The admissions requirements for the Master of Science in Financial Engineering (MScFE) program allow students to submit evidence that they can be successful if admitted to the programs offered. To earn the Foundations of Financial Engineering Certificate, composed of the first two courses in the MScFE program, students must be admitted to the Master of Science in Financial Engineering degree program.

WorldQuant University admits all qualified applicants regardless of age, race, national origin¹, ethnicity, marital status, sexual preference, gender, religion, creed and/or physical or mental disabilities.

Admissions Requirements

Applicants are admitted to WorldQuant University's Master of Science in Financial Engineering (MScFE) program when they complete the following requirements:

- Submit the **online application** with all of the required information and supporting documents including a clear and legible copy of a **government-issued photo ID**;
- Proof of English Language Proficiency:
 - ✓ Applicants who have earned a degree at an institution where English was not the language of instruction must demonstrate their English proficiency through the submission of test scores from an accepted provider (see list in the next section);
- Earn a passing score (75% or higher) on the **Quantitative Proficiency Test**;
- Sign the **Enrollment Agreement**: Applicants must sign an Enrollment Agreement to confirm that they have read, understand, and agree to comply with the University's policies and procedures listed in the agreement and detailed in the University Catalog;
- Submit **official transcripts** for their highest previously earned college/university degree (**completed** bachelor's degree from an accredited institution, or its equivalent, is required at minimum):

¹ WorldQuant University is licensed in the United States and must follow U.S. State Department regulations regarding sanctioned nations. Unfortunately, at this time we are not able to offer our program to students who are citizens of the following countries: Iran, Syria, North Korea, Cuba, and Crimean Peninsula.

- ✓ Full matriculation requires submission of an official transcript prior to the last day of the second course in the Program;
- ✓ Applicants may submit an unofficial transcript for the completed degree at the time of the application for conditional admission;
- ✓ The institution where the previous degree was earned must be accredited by an agency recognized by the U.S. Department of Education or listed in the International Handbook for Colleges and Universities;
- ✓ If the previous degree was completed outside of the United States, an evaluation from an agency listed as an active member of the National Association of Credential Evaluation Services ([NACES](#)) may be required (see more details on the following page). The Foundation for International Services ([FIS](#)) and the World Education Services ([WES](#)) are two of the many agencies that can be used.

English Language Proficiency Requirements

For admission into the Master of Science in Financial Engineering (MScFE) program, non-native English-speaking applicants who have earned a degree at an institution where English was not the language of instruction must demonstrate English proficiency by earning a passing score on one of the English proficiency tests listed in the table below:

Test	Type of Test	Cost	Minimum Passing Score
Duolingo English Test	Online	\$59 USD	100
TOEFL iBT	Online	\$185-\$325 USD*	71
IELTS	Test Center	\$215-310 USD*	6.5
PTE Academic	Test Center	\$180-220 USD*	50
4-skill Michigan English Test (MET)	Online	\$150-\$180 USD*	55
Michigan Examination for the Certificate of Competency in English (ECCE)	Test Center	\$110-\$180 USD*	650 (LP)
Michigan Examination for the Certificate of Proficiency in English (ECPE)	Test Center	\$130-\$200 USD*	650 (LP)

**Price may vary by country*

Once completed, applicants must upload a copy of their test results within the online application.

Test centers to take IELTS, and PTE Academic tests are distributed worldwide. For more information on the accepted English proficiency tests, please visit their respective websites.

Submitting Official Transcripts

Applicants may be conditionally admitted to the degree program upon submission of unofficial transcripts if the transcripts include the cumulative GPA and the date on which the degree was conferred.

Official transcripts must be sent directly from the previously attended institution via email (preferred) **or** via postal mail.

Institutions that issue digital official transcripts may submit them via email to admissions@wqu.edu along with relevant details on the digital transcript validation process.

Institutions that issue paper copies only must send them via postal mail in a sealed envelope to the following address:

WorldQuant University
Admissions Office
609 H Street NE, Suite 335
Washington, DC 20002
USA

In both cases, the official transcripts must be signed by the appropriate University official and must include the University stamp or logo as well as the grading scale used by the institution.

WQU highly recommends that students request official transcripts from their previously attended institution(s) immediately upon acceptance. Conditionally admitted students must submit their official transcripts by the end of the second course of the program. Failure to provide an official transcript on time will result in immediate suspension from the MScFE degree program. Suspended students are granted one term (three months) to submit their official transcripts. Once the official transcripts have been received, the student may resume their studies at the next available course start date. Suspended students who do not submit an official transcript within one term (three months) upon suspension are withdrawn from the program.

US Equivalency for Degree Programs Completed Outside of the U.S.

Official transcripts for a degree program completed in a country outside the U.S. must include the following information:

- The type of degree completed (bachelor's, master's, or doctorate degree);
- The date when the degree was conferred;
- A list of all courses along with the corresponding credits (or units) and the grades earned;
- A legend with the grading scale and the key to read the transcript;

- Signature by the appropriate university official.

If the official transcript does not include one or more of the characteristics described above, students are required to obtain an **official U.S. degree equivalency** from an organization recognized by the National Association of Credential Evaluation Services ([NACES](#)), such as the Foundation for International Services ([FIS](#)) or the World Education Services ([WES](#)).

By submitting a copy of the transcript at admissions@wqu.edu, (prospective) students may request WorldQuant University's help to assess whether a U.S. degree equivalency is required.

Conditional Admission

Successful applicants are "conditionally admitted" to the MScFE program. They are not considered "fully matriculated" until:

- They complete the first two courses in the program (*MScFE 560: Financial Markets and MScFE 600 Financial Data*) with a cumulative average score of 80% or above
 - ✓ Students who do not earn a passing grade after attempting *MScFE 560: Financial Markets* twice must wait for a period of two (2) course sessions (six months) before being eligible to register again and to re-attempt the course;
 - ✓ Students with a cumulative average score lower than 80% after passing the second course are given the opportunity to repeat the course where they earned the lowest grade
- The University has received, verified, and validated the provided documentation including:
 - ✓ Valid government-issued photo ID;
 - ✓ Official transcript(s) for the highest degree earned from an institution accredited by an accrediting organization recognized by the U.S. Department of Education or listed in the International Handbook of Colleges and Universities.

Additional Considerations

While anyone meeting the admissions requirements is encouraged to apply, candidates with some or all the following skills may be better prepared for the curriculum:

- Bachelor's degree (or equivalent 4-year degree) in a technical discipline such as mathematics, computer science, engineering, or economics
- Experience with analyzing datasets

- Knowledge of linear algebra, probability, and statistics
- Thorough knowledge of Python programming
- Experience in other programming languages such as R, C++, Java, etc.
- Experience with discrete optimization
- Relevant work experience in financial management, banking, quantitative trading, algorithmic trading, data analytics, etc.

Sanctioned Nations

WorldQuant University is licensed and accredited in the United States and must follow U.S. State Department regulations regarding sanctioned nations. Unfortunately, currently we are unable to offer our Program to students who are citizens of the following countries: Iran, Syria, North Korea, Cuba, and Crimean Peninsula.

Application Process and Acceptance

WorldQuant University runs its MScFE Program on a quarterly schedule. Applications are due at least one week prior to the start of the desired academic session of attendance.

Applicants are fully responsible for completing and submitting their applications on time for the desired Program start date. To get started, prospective students create an account at <https://learn.wqu.edu/>. This account will be used for all subsequent logins into the WQU learning platform.

Upon successful account creation, applicants are required to complete a Quantitative Proficiency Test to measure their prerequisite mathematical and statistical skills as well as basic Python programming concepts. The minimum passing grade for the Quantitative Proficiency Test is 75%. If they fail the first attempt, applicants may retake the test after a minimum cooling off period of seven (7) days. Those who fail the Quantitative Proficiency Test a second time may request to retake it a third, and last time after six (6) months. Prior to retaking the test, these applicants are strongly encouraged to refresh their prerequisite skills by completing courses and activities provided in the WQU [Student Resource Center](#).

Applicants who earn a passing grade on the Quantitative Proficiency Test continue the application process by completing a profile and uploading all required documents (i.e., copies of their government-issued photo ID, unofficial transcripts, and, if applicable, proof of English proficiency).

It is the responsibility of the applicant to ensure that all parts of the application have been completed accurately and that all supporting documents have been uploaded. Once an application has been submitted, applicants can no longer make any changes to their submission.

At the end of the application process, successful applicants are required to sign an Enrollment Agreement to acknowledge that they have read, understand, and agree to adhere to the University's Terms of Use, Privacy Policy, and the policies and procedures listed in the agreement itself and detailed in this Catalog. A copy of the Enrollment Agreement signed by both parties is archived in the student profile, where it can be accessed and downloaded by the student at any time.

Upon signing the Enrollment Agreement, students are conditionally admitted to the MScFE program and receive an email to notify them of their acceptance to the program.

Prior to registering for their first MScFE course, all newly accepted students are required to complete an Orientation Course that includes an introduction to online learning, information on the Program and course structure, tips on time management, and guidelines on assignments and academic writing. Successful completion of the Orientation Course with a minimum passing grade of 80% unlocks the ability to register for the next available session of the first course in the Program. Students become fully matriculated once they have successfully completed the first two courses in the program with a cumulative average score of 80% and the Registrar has verified and validated all submitted documents, including official transcript for their highest previously earned degree, which must be sent directly from the previously attended institution and received by WQU before the end of the second course. Students receive an email to notify them of their matriculation status.

Fully matriculated students also receive the "Foundations of Financial Engineering" Certificate of completion.

Student Identity Verification Policy

WQU's Student Identity Verification process begins with the submission of admissions documents during the application process and continues through students' graduation, transfer, or withdrawal from the institution.

To verify that the student registering for a course is the same student who participates in the program and earns credit, WQU uses the following methods:

- Receipt of official transcript and government issued photo ID at the time of enrollment
- A secure login and authentication process using a personal account
- Students must show their government-issued photo ID as part of the recorded presentation of their capstone project submitted at the end of the Capstone Course.

Further, when students contact WQU to request information about their own educational records, authorized WQU staff asks personal questions based on personally identifiable information collected through the initial application (i.e., date of birth, address, and/or email address).

Transfer Credit Policy

WorldQuant University may accept previously earned, graduate-level transfer credits from other institutions towards the MScFE degree program. Students who wish to apply for transfer credits must submit documentation via email to admissions@wqu.edu including a copy of the catalog, course syllabi, and/or course outlines. While eligibility for transfer credit can be evaluated based on unofficial transcripts, they will only be accepted and finalized upon submission of **official transcripts**.

The following guidelines will be used to evaluate the transfer credit:

- The institution where the student earned the transfer credit must be accredited by an agency recognized by the U.S. Department of Education, or an accepted foreign equivalent that is listed in the **International Handbook of Universities**. Credits earned at a foreign institution may require an evaluation by an agency listed as an active member of the National Association of Credential Evaluation Services ([NACES](#));
- To be eligible for transfer, the credits must be relevant to the MScFE curriculum and no older than three years upon initial admission to the MScFE program;
- A minimum grade of “B” or “3.0” must have been earned for each course completed to be eligible for transfer. Only courses in which grades were awarded are considered. Credits earned as a result of a “pass/fail” option are not eligible for transfer;
- A maximum of 8 semester credit hours may be applied towards the MScFE degree program, corresponding to 20.5% of the credits required to graduate;
- Transfer credit will not be counted in the calculation of the cumulative average score
- Transfer of credit must be completed prior to enrollment in the first course. Submitting an official transcript in a timely manner is the sole responsibility of the student.

The Academic Dean completes transfer credit evaluations with the guidance of an experienced team of faculty members who are qualified professionals and help make final determination on transfer credit awards.

Students who withdraw from the MScFE program and then reapply within five (5) years from withdrawal may apply all the credits they previously earned at the time of their subsequent re-enrollment provided they earned a minimum grade of “B” or “3.0” or higher.

WorldQuant University reserves the right to accept or reject any or all requested transfer credit at its discretion. Students may appeal the transfer credit evaluation by sending an email to admissions@wqu.edu.

Experiential Learning Credit

WQU does not award credit for experiential learning.

Accommodations for Students with Disabilities

WorldQuant University is an equal opportunity institution and is committed to providing access to education for students with disabilities following Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Amendment Act (ADA) of 1990, amended 2009.

WorldQuant University makes reasonable accommodations for qualifying disabled individuals in accordance with the law. A request for accommodation will be considered if:

- It is based on documentation submitted by the student (i.e., medical records)
- It does not compromise essential requirements for the completion of the program
- It does not impose an undue financial or administrative burden upon the University.

Students seeking accommodation should submit the following documentation to the University's ADA Compliance Officer via email at adaofficer@wqu.edu:

- A statement of the physical, mental, or learning impairment from a qualified licensed healthcare professional;
- A recommendation for reasonable course accommodation where possible;
- A written consent to exchange information.

Recognizing that self-disclosure of a disability or medical issue by a student is a private personal matter that must be carefully managed by the University to adhere to privacy laws and regulations, the ADA Compliance Officer will work directly with the student that discloses a disability. The ADA Compliance Officer will identify and execute reasonable accommodations that will sustain student confidentiality, academic integrity, and completion of course and program objectives.

Although special accommodations would be best if arranged at the time of enrollment, the University will not request disclosure of a disability at any time during the program. Further, WQU faculty members are prohibited from asking a student if he or she has a disability; the decision to share or disclose a disability rests entirely with the student.

III. Student Records and Privacy Policy

The Registrar's Office at WorldQuant University maintains the official academic records for all students who are currently enrolled or have been previously enrolled in a program. All documents submitted to WQU become the permanent property of the University.

Privacy Policy and Release of Student Records

WQU's policy regarding student privacy and confidentiality follows the [Family Educational Rights and Privacy Act \(FERPA\)](#) guidelines. FERPA was designed to protect the privacy of educational records, establish the rights of students to inspect and review their educational records, and provide guidelines for the correction of inaccurate or misleading information through informal and formal hearings.

Under FERPA regulation, WQU students² are afforded the following:

- The right to inspect and review their own educational record pertaining to academic standing and other information at any time;
- The right to request the amendment of their educational record that they believe to be inaccurate or misleading. The University will investigate the request and may decide whether to accept the amendment;
- The right to not disclose their educational records without obtaining prior written consent, except to the extent that FERPA authorizes disclosure without consent;
- The right to file a complaint with the US Department of Education concerning alleged failures by the University to comply with FERPA requirements, in the instance that a complaint cannot be resolved within the University.

Following FERPA regulation, student personal academic information may be disclosed without the student's written permission to the following:

- School official with legitimate educational interest (i.e., WQU employees or third parties contracted by WQU whose responsibility justifies access to all or part of an educational record);
- Other schools to which the student desires to transfer;

² A student is defined as any individual currently enrolled in the MScFE program, or one who has been enrolled in the past.

- Official of the US Department of Education, state education authorities, and other appropriate parties following health and safety emergency or judicial orders;
- Accrediting organizations while carrying their functions;
- Organizations conducting research for the University.

Should students wish to authorize access to personal data in their student records by another party, such as a spouse or employer, they must submit a written notification to the University with the full name of the person or agency to whom the data should be released. Those named parties must know personal identifiable information regarding the student before a university official discloses student information.

WQU identifies the following items as “**Directory Information**” which may be released without student consent: Name; City; State and Country of residence; dates of attendance; enrollment status; credentials and awards received; the most recent school attended; and other comparable information. If a student does not want this information disclosed, they must notify the University by submitting a signed written request.

WQU depends on the accuracy of the records submitted by its students. False information on an application as well as any act to intentionally mislead or misinform instructional personnel or administrators is grounds for disciplinary action, including dismissal from the University.

Students seeking access or amendment to their educational records should contact Student Support via the Help Center at: <https://intercom.help/wqu/en/>.

Student Record Maintenance Policy

WQU maintains comprehensive records on all students who enroll in a program. Student records include:

- Personal information (i.e., name, address, email, government-issued photo ID)
- Employment status, occupation, industry
- Transcripts of previously completed degree programs
- Proof of English language proficiency (where applicable)
- Passing score of the Quantitative Proficiency Test
- Official transcript for transferred credits, if applicable
- Student initiated petitions (i.e., grade appeals, complaints)
- Course completed and grades received
- Student Academic Progress status

- Disciplinary actions
- Degree conferred/diploma
- WQU transcript

Under state and federal laws, the University maintains student records for a minimum of five (5) years after the student graduates, is terminated, or otherwise exits, and transcripts of grades for a period of fifty-five (55) years.

IV. Financial Information

Tuition

WorldQuant University was founded on the belief that talent is equally distributed geographically, culturally, and economically whereas opportunity, unfortunately, is not.

WQU has made it our mission to remove barriers to opportunity and make education more accessible to capable students from diverse backgrounds. In support of its mission, the programs offered are delivered completely free of cost to any applicant that qualifies for admission.

Instructional materials including course notes, videos, infographics, open access resources, and applications used to develop and run programs are made available to the students via the WQU online platform at no charge. Third party proctoring services, support services, and library services are offered free of cost as well.

Financial Aid

Since WQU does not charge any tuition or fees to students, it does not participate in any financial aid programs.

Refund Policy

Since WQU does not charge any tuition or fees to students, there is no refund policy in place.

V. Academic Policies

The University's general academic policies and procedures are designed to ensure a consistent, high-quality educational environment for students. The University understands and recognizes that exceptions to these policies may be necessary due to unforeseen circumstances. WQU makes every reasonable effort to accommodate such circumstances, provided the principle of the policy is not compromised.

Students are responsible for following all applicable WQU policies and procedures and are encouraged to contact WQU Student Support for further clarification and details. In the event of conflicting information, written messages take precedence over any verbal communication.

Students have the right to appeal the University's policies and procedures described in this Catalog. The submitted appeal will be reviewed by the Academic Dean.

Credit Hour Policy

WorldQuant University operates under the semester credit hour system. All curricula are designed, developed, and delivered following its published semester credit hour policy:

"One semester credit hour is fifteen (15) hours of academic engagement and thirty (30) hours of preparation".

Academic engagement includes watching video lectures related to the course notes; participating in live sessions; seeking clarification about course content; actively participating in forum discussions with faculty, instructors, and classmates; and taking practice and graded quizzes.

Preparation includes completing reading assignments; reviewing and mastering further reading and multi-media content assigned by faculty; preparing to take weekly quizzes; completing Collaborative Review Tasks; conducting research to complete Group Work Projects; developing and executing programs and analyzing the obtained results.

Academic engagement and preparation time in terms of hours are specified in the course syllabus for each course. The syllabus also describes the methods of instruction and methods of assessment used in the course.

Grading Policies

Successful completion of each course in the program is based on the grade percentage scale shown in the table below:

Grade Percentage	Designation
90-100	Excellent
80-89	Proficient
70-79	Satisfactory
0-69	Unsatisfactory

Students may also receive the following designations, as appropriate.

- **TC** (Transfer Credit): Semester credit granted for credits accepted in transfer from other institutions.
- **R** (Repeated Course): Students must retake a course to improve an Unsatisfactory grade (below 70% or Fail). Once a grade percentage is recorded for the repeated course, the original grade will be marked as “R”. The grade percentage earned from the passed course will be used in computing the cumulative average score for the program. Students can use the Repeat policy for a maximum of two (2) courses during the program (See the Fail Policy below).
- **W** (Withdrawal): Students may withdraw from a course before the end of the third (3rd) week by notifying Student Support. Students can withdraw from a maximum of two (2) courses without it affecting their cumulative average score. Withdrawal after the end of the third week is marked as a **WF** (Withdrawal/Fail) and is counted in the calculation of the cumulative average score as a 0%.

Transfer credit, repeated courses, and withdrawals do not correspond to any grade percentage and are not used in the calculation of the cumulative average score.

Fail Policy: Students may earn an Unsatisfactory grade and fail a maximum of two (2) courses over the duration of the Program, or the same course twice. If a student earns an Unsatisfactory grade a third time, he/she will be withdrawn from the Program, and may be re-admitted after a remedial plan has been completed.

Cumulative Average Score Calculation

The cumulative average score is the weighted average of the grade percentage score earned in all the courses completed. Transfer credits are not counted in the cumulative average score calculation. A minimum cumulative average score of 80% is required to maintain a satisfactory academic progress.

Grading Criteria

The grade percentage allocated for each type of activity in all the courses (except for the Capstone) is as follows:

- 35-40% Weekly Quizzes (seven or eight graded quizzes)
- 20% Collaborative Review Tasks (two submissions in Week 2 and 4 and two peer reviews in Week 3 and 5)
- 30-34% Group Work Project (two or three submissions throughout the course)
- 11% Participation in discussion forums

In the Capstone Course, 55% of the final grade is distributed among assignments related to the development of the Capstone Project (i.e., Problem Statement, Literature Review and Competitor Analysis, Draft Project); the remaining 45% is for the assessment of the final project and the related recorded presentation.

The general grading criteria as well as the percentage assigned to each activity are specified in the course syllabus published in the online learning platform for each course session.

Grading Rubrics

Grading rubrics are a set of guidelines that help assess student work and provide a standardized structure to apply consistency and fairness in the grading process. Grading rubrics help students understand faculty expectations for completing assignments, make them aware of the criteria that will be used to evaluate their work, and learn how to prepare themselves for a successful result.

Grading rubrics are used by the students to grade Collaborative Review Tasks and by the WQU Instructional Team to grade Group Work Projects. All grading rubrics are made available to students along with their corresponding assignments and to faculty while they complete the grading process.

Grade Reporting

Faculty report final grades within five (5) to seven (7) business days of the end of a course. Grades are reported in the online learning environment.

Students can access their grade reports at any time during the course to view their progress by using their individual account.

Grade Appeals

Students who believe they have been graded unfairly may appeal their final course grades. The burden of proof in appealing a grade rests with students. For a change in grade to be recommended, students must show that the originally awarded grade was unjustly or unfairly awarded. The steps for appealing a grade are as follows:

1. Students must contact the Student Support (<https://intercom.help/wqu/en/>) within five (5) days of final course grades being posted in the online platform. The appeal must explain why the grade received was incorrect and must include supporting evidence. Specific grade appeal forms are made available to students via the Help Center.
2. Student Support will submit the appeal to the Academic Dean who will review it. The Academic Dean may decide to involve a member of the WQU Instructional Team other than the instructor who graded the student's work. Based on the received recommendation, the Academic Dean will make a final decision on whether the grade should be changed.
3. The Academic Dean will report the final recommendation and grade change on the platform within five (5) days of receiving the appeal.
4. Student Support will notify the student of the final decision and will place a record of the appeal and final recommendation in the student's academic record.

Satisfactory Academic Progress Policy

To maintain Satisfactory Academic Progress (SAP), students must:

- Maintain a cumulative average score of 80% or above
- Complete the program within the Maximum Time Frame (MTF) of 150% (3 years) of the scheduled program length of two (2) years.

Students' academic progress is reviewed throughout the Program at the end of each term. This frequency ensures that students at-risk of not meeting SAP receive sufficient notification that they may be placed on Academic Warning if they do not return to Good Standing. Failure to meet the Satisfactory Academic Progress (SAP) standards within the timeframe allotted results in academic probation and/or termination.

Academic Warning, Continued Warning, and Termination

Following SAP review every 16 weeks, students are placed on the following SAP statuses:

- **Acceptable Average:** At the time of enrollment, the SAP status is 'Acceptable Average'. The status remains unchanged provided students continue to meet the SAP standards.
- **Academic Warning:** Students who do not meet the SAP standards after completing 2 courses are placed on Academic Warning and receive a Warning Notification via email and an academic improvement plan to return to 'Acceptable Average'. The Academic Warning status extends through the following two completed courses (16 weeks).
- **Continued Warning:** Students who fail to return to 'Acceptable Average' after completing two subsequent courses following the initial Academic Warning notification are placed on Continued Warning. A Continued Warning notification is sent via email and a revised academic improvement plan to return to 'Acceptable Average'.

Students with Continued Warning status who do not return to 'Acceptable Average' during the Warning period, but show progress toward regaining an acceptable average, may be granted one more 16-week period (two courses) to continue making progress on their academic improvement plan and return to 'Acceptable Average'. During this additional evaluation period, the student's SAP status reflects 'Continued Warning'.

- **Academic Termination:** Students who fail to return to 'Acceptable Average' at the end of the Continued Warning period are academically terminated from the program and withdrawn from the University. Students receive notice of Academic Termination via email and will no longer have access to the online learning environment.

Progress toward regaining good standing is demonstrated by students raising their cumulative average score to 80% or above and/or showing the ability to complete the program within the maximum timeframe of three years.

Appeals and Re-Admission Policies

This Appeals Policy applies to decisions made by the University on violations of the Satisfactory Academic Progress Policy (above), [Academic Integrity Policy](#) (Page 38-40), and [Student Code of Conduct Policy](#) (Page 41-43). It is not applicable for Grade Appeals (see [Grade Appeals Policy](#), Page 32).

Appeals

Students who wish to appeal a change in their SAP Status or the Academic Dean's determination related to a violation of the Academic Integrity or the Student Code of Conduct Policies must do so in writing within ten (10) business days counted from the day the notification email was issued by the University. Appeals must be submitted to the Academic Dean in writing and include appropriate documentation (e.g., a physician's statement, accident report, evidence of grade miscalculation, evidence that the submitted assignment is student's original work, or other relevant information) demonstrating that the WQU policy violation was beyond the student's control or did not occur.

The Academic Dean reviews the appeal and supporting documentation in consultation with faculty and/or the CEO, as needed, and makes a final decision within ten (10) business days of receiving the appeal. Students receive notification of the appeals decision in writing via email and all the documentation is added to their academic record. The decision of the Academic Dean is final.

Probation Status (SAP Status Appeals Only)

In cases where an appeal to the change in their SAP status is accepted, the student is placed on Probation status and closely monitored for the following two terms. During this time, students receive an academic improvement plan to return to Good Standing by the end of the Probation period.

Students who do not return to Good Standing by the end of the Probation period are academically terminated from the program and withdrawn from the University. Termination following Probation is not appealable.

Re-Admission

Students whose enrollment was terminated for not meeting SAP standards are eligible for re-admission following a minimum of six-month waiting period to allow them to fill their knowledge gaps. These students will be required to complete the application, including the Quantitative Proficiency Test, and to retake some of the courses completed during the previous Program enrollment.

A student who has voluntarily withdrawn from WQU or has been administratively withdrawn due to reasons other than violation of the Academic Integrity or the Student Code of Conduct policies, may re-apply to WQU by starting a new application and completing the formal admissions process.

In all re-admission cases, the Program requirements based on the current University Catalog in effect at the time of the new enrollment will apply. Students can only re-enroll once.

WQU considers past academic records, remedial work subsequently completed, and other extenuating circumstances when evaluating re-admission decisions.

MScFE Graduation Requirements

To graduate and earn a Master of Science in Financial Engineering, students must:

- Successfully complete all required courses, including the Capstone Course
- Earn a total of 39 semester credit hours
- Be in academic good standing:
 - ✓ Obtain a Program average score of 80% or above
 - ✓ Complete the program within the Maximum Time Frame (MTF) of three (3) years

Once graduation requirements have been verified, the student will be awarded a digital diploma along with an official transcript.

FFE Completion Requirements

To earn the Foundations of Financial Engineering Certificate, students must:

- Successfully complete the first two required courses in the MScFE Program
- Earn a total of 8 semester credit hours
- Be in academic good standing:
 - ✓ Obtain an average score of 80% or above
 - ✓ Complete the first two courses in the MScFE Program within the Maximum Time Frame (MTF) of nine (9) months

Once completion requirements have been verified, the student will receive a digital certificate of completion.

Registration Policy

Students are responsible to register for their next upcoming course. Those who are unable to attend a course may request a Leave of Absence (see Leave of Absence Policy below). Students already registered for a course but unable to participate may cancel their registration within the first week of the course or withdraw from the course in weeks 2 or 3.

Once they pass the first course in the program, students are granted a maximum of two (2) Cancellations and two (2) Withdrawals. Cancellations are not included in the transcript but do count towards the Maximum Time Frame (MTF). Withdrawals are included in the transcript and count against the MTF, but do not impact the calculation of the Program average score. Students who do not register or take a Leave of Absence for two consecutive registration periods (corresponding to two terms of three months each) are automatically withdrawn from the program.

Leave of Absence Policy

At the time of the registration, students who are unable to attend their next upcoming course may take a Leave of Absence (LOA). Up to two (2) Leaves of Absence may be granted over the course of the entire MScFE Program. Leaves of Absence are not included in the transcript and do not count against the Maximum Time Frame (MTF).

Students are not permitted to take a Leave of Absence during an ongoing course. Leaving a course prior to completion is considered a course withdrawal.

Attendance Policy

Students are required to actively participate in their online course and to complete assignments on a weekly basis, as outlined in the course syllabi. Minimum attendance requirements are satisfied with either one of the following options:

- Completing a practice or graded Quiz,
- Submitting a Collaborative Review Task, or
- Participating in an online discussion about academic course topics by posting in a discussion forum (200 characters at minimum).

Logging into the learning platform and accessing the course without completing an activity or actively participating does not fulfill the minimum attendance requirements.

Students who do not actively participate in the first week of a course by completing one of the activities listed above are automatically cancelled from the course (see Registration Policy above).

Students who do not actively participate in the second week by completing one of the activities listed above are automatically withdrawn from the course. Note that completing Week 2 activities during Week 1 does not prevent automated course withdrawal. For more details on the Withdrawal policy, please refer to the Grading Policy earlier in this section.

The Student Journey Chart, which can be found in Appendix A at the end of this Catalog, includes a comprehensive visualization of the course attendance policy and other relevant policies.

Extension Requests

All assignments are due on the submission deadline for each course activity as specified in the course syllabus, in the students' calendar, and in the online course room. To add some flexibility to the rigorous schedule, the University provides a limited number of extensions for quizzes and collaborative review tasks throughout the program, where students are able to move the submission deadline within a week from the date published in the online course.

To request a group work project extension, students must complete a form available in the [Student Resource Center](#) and submit it via the chat icon in the bottom right corner of the [Help Center](#). If the extension is granted, the Student Support Team modifies the deadline based upon the faculty or Academic Dean recommendation.

VI. Other Academic Policies and Regulations

Non-discrimination Policy

WorldQuant University provides open access to its Program and services to all capable students and does not discriminate against any person on the basis of age, ancestry, color, ethnic group identification, national origin, religion, race, gender or sex, sexual orientation, physical or mental disabilities, veteran status, or on the basis of these perceived characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.

Academic Integrity Policy

Commitment to the principles of academic honesty and integrity is essential to the mission of WorldQuant University. To maintain an academic climate that is conducive to each student's success, WQU requires students to adhere to a set academic integrity policies and standards.

The following actions constitute a violation of the WQU Academic Integrity Policy: plagiarism; self-plagiarism; cheating; fabrication; engaging in or facilitating academic dishonesty; republishing or redistributing any course materials³, student's own work, or another student's work; uploading WQU content to websites or linking to it through services. In more detail:

- **Plagiarism** is defined as representing words, ideas, or work of another individual or entity as that of the student without giving proper credit to the original author or source. Students commit plagiarism when they:
 - ✓ Copy a statement or paragraph created by another person without using quotation marks and a reference to the source and the author, **and without explaining why the copied statement supports their original work**;
 - ✓ Use information that is not considered common knowledge without giving credit to the source;
 - ✓ Purchase a paper from the Internet or a vendor and submit it as a personal paper;
 - ✓ Use AI tools improperly by copying and pasting entire paragraphs of AI generated text.
- **Self-Plagiarism** is defined as submitting previously submitted course work in previous courses that may or may not have received academic credit, without prior approval of

³ *Assignments, notes, assessments, audio or video recordings, and other documents and information within a course are the property of WQU unless explicitly noted.*

faculty;

- **Cheating** is defined as using or attempting to use unauthorized materials, information, study aids, or computer-related information;
- **Poor scholarship** is defined as an incorrect attempt to give credit to or document the use of an external source;
- **Misrepresenting academic engagement** is defined as intentionally logging onto the learning management system without meaningfully engaging in academic activities for the purpose of demonstrating attendance.

In addition to the violations listed above, **failure to contribute to group work projects and to actively collaborate and communicate with group members in a timely manner** (i.e., share contributions in advance of the submission deadline to allow for collaborative revisions among all group members) is considered a serious violation of the University's Academic Integrity Policy.

Plagiarism and Use of Turnitin

At the time of submission, some assignments in each course are run through Turnitin, a plagiarism detection software. Turnitin generates a similarity report that matches the submitted paper against its database (peer reviewed journals, textbook, internet resources, etc.) as well as papers created by other students at WQU or in other institutions. Before the submission deadline, students can download and make use of the Turnitin similarity report to revise their final paper for grading. The similarity report shows a similarity score equal to the percentage of matches found in Turnitin's database.

Students are responsible to:

- Understand what constitutes plagiarism (extensive information, tutorials, and guidelines are provided in the [Student Resource Center](#) on the WQU online learning platform);
- Review the Turnitin similarity report for each assignment prior to the submission deadline;
- Edit their work prior to the final submission to ensure that any statements from other authors are properly quoted, cited, and **mindfully used to support their original work rather than forming the basis of the argument itself.**

Based on the Turnitin similarity report, the Instructional Team evaluates whether the student committed plagiarism and may report the issue to the Academic Dean.

Proper Use of Generative AI

WorldQuant University encourages the ethical and responsible use of generative AI tools to assist students with their coursework and assignments (i.e. to collect raw information, create an outline, etc.). **This requires students to declare the use of AI through in-text citations and references.**

Copying and pasting AI-generated content directly to an assignment submission without proper attribution is considered plagiarism and thus a violation of the University's Academic Integrity Policy.

To maintain a high standard of academic honesty and rigor, the University uses Turnitin's AI Writing Indicator, which detects the percentage of AI-generated content in student submissions. Consequences for improper use of AI in assignments range from the deduction of points in cases where the percentage of AI-generated content is between 20% and 50% to probation or program termination if the use of AI-generated content exceeds 50%.

Further details about the consequences for violations of the University's Academic Integrity Policy are outlined in the following paragraph.

Consequences for Violating the Academic Integrity Policy

When an academic integrity violation (e.g., plagiarism, failure to collaboratively contribute in group work, improper use of AI) is reported, the Academic Dean conducts a comprehensive investigation to determine the extent of the violation before determining disciplinary action. This investigation includes a review of past assignments submitted by the student and the Academic Dean reserves the right to change past grades if plagiarism is identified in previous assignments.

Students receive notification via email of the outcome of the investigation and consequences of their academic integrity violation.

Probation

Students who violate the University's Academic Integrity Policy for the first time earn a failing grade in the course they are completing, and their Academic Integrity Status is changed to 'Probation'. Further, a note describing the violation is added to the student record for future reference. Students on probation status are allowed to continue in the program.

Termination

Students who violate the Academic Integrity Policy a second time are subject to termination. Depending on the severity of the violation, the Dean reserves the right to terminate a student upon the first violation.

All disciplinary actions are subject to an appeal. See the [Appeals and Re-Admission Policies](#) on Page 34-35 of this Catalog.

Student Code of Conduct Policy

The Student Code of Conduct sets forth the standards of conduct expected of students at WQU. This code is not exhaustive. Students may be subject to disciplinary actions for other behavior and/or activities deemed unacceptable or disruptive to the goals and mission of WQU and to the expectation of professionalism in the online learning environment.

Actions Constituting Violation of the Student Code of Conduct Policy

The following actions constitute violations of the WQU Student Code of Conduct:

- Sharing personal account information to access the online platform with anyone.
- Use of any religious, inflammatory, offensive, or flagrant language in the online learning environment, including discussion forums, or in private communications with the Instructional Team, the Academic Dean, or WQU Staff.
- Use of any religious, inflammatory, offensive, or flagrant language in private communication channels created on external platforms (i.e., WhatsApp, Telegram, Discord, etc.) to collaborate on group work projects.
- Use of any religious, inflammatory, offensive, or flagrant language related to WQU or WQU representatives on social media or on WQU social media accounts.
- Violating WQU email policy (see [Student Email Policy](#), Page 52).
- Misrepresenting oneself as an official WQU spokesperson online or on social media.
- Engaging in a consensual romantic or sexual relationship with a WQU faculty or staff member while enrolled at WQU.
- Endangering, threatening, or causing harm to any member of the WQU community, causing reasonable apprehension of such harm or engaging in conduct or communications that a reasonable person would interpret as a serious expression of intent to harm.
- Impersonating another, using another person's identity, or furnishing materially false information, including manufacturing or possession of false identification.
- Forgery, fabrication, falsification, unauthorized alteration, or misuse of university documents, records, or identification.
- Unauthorized use of university property and/or resources.
- Unauthorized access to, disclosure of, or use of any University document, record, or

identification including, but not limited to, electronic software, data, and records.

- Interfering with or disrupting University or University-sponsored activities.
- Misuse, theft, misappropriation, destruction, damage, or unauthorized use, access, or reproduction of property, data, records, equipment, or services belonging to the University or belonging to another person or entity.
- Engaging in retaliation, harassment, or repeated contact that a reasonable person would understand to be unwanted, including stalking, attempt of money extortion, and/or sexual harassment.
- Engaging in any discriminatory activities as prohibited by applicable law or University policy.
- Interfering with any University disciplinary process.
- Engaging in any illegal sexual offense, including, but not limited to, sexual assault, public sexual indecency, or indecent exposure.
- Violation of any other University policy.
- Conduct that is illegal under state or local law.

Sexual and Other Harassment

WQU is committed to providing an educational environment free of sexual harassment. WQU policy prohibits sexual harassment and harassment based on pregnancy, childbirth or related medical conditions, race, religious creed, color, gender, national origin or ancestry, physical or mental disability, medical condition, marital status, registered domestic partner status, age, sexual orientation or any other basis protected by federal, state or local law or ordinance or regulation.

WQU's anti-harassment policy applies to all students, as well as to all faculty, staff, and administrators involved in the operation of WQU. It also prohibits harassment based on the perception that anyone has any of the above-described characteristics or is associated with a person who has or is perceived as having any of those characteristics.

Prohibited harassment includes, but is not limited to, the following behavior:

- Verbal or written conduct such as epithets, derogatory jokes or comments, slurs or unwanted sexual advances, invitations or comments;
- Visual displays such as derogatory and/or sexually oriented posters, photography, cartoons, drawings, or gestures;
- Physical conduct including assault, unwanted touching, intentionally blocking normal movement or interfering with work because of sex, race or any other protected basis;

- Retaliation for reporting or threatening to report harassment.

Consequences for Violating the Student Code of Conduct Policy

Students who violate any part of the Student Code of Conduct are subject to disciplinary actions, including probation and termination. Students receive notification of the consequences of their Code of Conduct violation via email.

Probation

During probation, students may continue in the program. While on probation, students are observed closely for additional violations of the Code of Conduct as outlined in the notification letter. Students who do not violate the Student Code of Conduct during the probation period will be placed back into Good Standing. Students who commit further violations will be terminated from WQU.

Termination

Depending on their severity, some violations will lead to immediate termination. Though this list is not exhaustive, students found harassing other students, Instructional Team members or WQU Team members, or participating in illegal activities may be terminated from WQU immediately. Students who have been expelled for these reasons will not be readmitted.

All disciplinary actions are subject to an appeal. See the [Appeals and Re-Admission Policies](#) on Page 34-35 of this Catalog.

Complaint and Grievance Policy

WorldQuant University is committed to providing students quality education and support services. Should students have an academic or administrative complaint on the quality of education and services received, they have the right to seek a resolution.

WQU strongly encourages students to reach out to Student Support or to their faculty to attempt an informal resolution of the complaint. The University firmly believes that any complaint or dissatisfaction can be resolved through interpersonal communication between the involved parties (student, faculty, staff). If the complaint is not resolved after exhausting all possible means of an informal resolution, students can file a written complaint using the Complaint Procedure below. Grade appeals must be completed using the Grade Appeals procedure reported in [Section V – Grade Appeals](#) of this Catalog (Page 32).

Complaint Procedure

1. The student contacts WQU Student Support at <https://intercom.help/wqu/en/> to obtain a Complaint Form. Upon receipt of the form, the student submits the completed form using the same link within fifteen (15) business days. The form must include a detailed description of the complaint and the solution requested.
2. The Academic Dean reviews the complaint, investigates, and responds to the student within fifteen (15) business days by accepting or denying the proposed resolution.
3. If the student does not accept the resolution within fifteen (15) business days, the complaint is escalated to the University's CEO who reviews all documentation on the complaint and provides a solution within an additional fifteen (15) business days. The CEO's decision is final. Failure to initiate Step 3 within fifteen (15) business days indicates that the student has accepted the Step 2 decision as final, and the complaint is considered resolved.

If the student or any other complainant believes that the proposed resolution was unsatisfactory after the complaint procedure has ended, they may use the grievance procedure described below.

Grievance Procedure

A grievance is a serious complaint that demonstrates that the student has been or is being adversely affected by 1) inappropriate interpretation of WQU policies or 2) inappropriate response, lack of response, or decision by any person with administrative control and responsibility.

If the student feels that his/her complaint has not been properly or fully resolved within the University after exhausting all possible informal and formal internal complaint procedures, they may file a grievance with the Washington, DC Higher Education Licensure Commission (HELC) by completing the form available on its [website](#) and submitting to: using the following contacts:

Office of the State Superintendent of Education Phone: (202) 727-6436
Higher Education Licensure Commission
1050 First St. NE, Fifth Floor
Washington, DC 20002

For complaints concerning non-compliance with accreditation standards and policies, the student, or any member of the public, may also file a complaint with the Distance Education Accrediting Commission (DEAC) through their [website](#), or to the following address:

Distance Education Accrediting Commission
1101 17th Street NW, Suite 808
Washington, DC 20036

Non-retaliation Policy

WQU is committed to operating with integrity and maintaining learning and working environments that are free from discrimination and harassment. Retaliation is any action, statement or behavior that is designed to punish an individual for filing a complaint of discrimination or harassment, participating in an investigation, appeal, grievance, or reporting a case where members of the WQU community are not complying with the University policies. Retaliation is an infraction and strictly prohibited.

Students who are aware of or have been subjected to retaliation should promptly report the matter immediately to the Academic Dean who will work with the student to file a complaint. Violators of this policy shall be subject to appropriate disciplinary proceedings as set forth in the Student Code of Conduct, and may be subjected to sanctions including, but not limited to, probation, suspension, and or termination.

Students who knowingly file a false report will be subject to disciplinary action that may include, but not limited to, probation, suspension, and or termination.

Intellectual Property

Students own the rights to all the work they created for the purpose of course and program completion at the University (“Student Work”), except as and for the period otherwise required by students’ written employment or consulting agreement made prior to enrollment, if applicable. Students grant to both the University and WorldQuant, LLC a non-exclusive, royalty-free, transferable, worldwide right and license to use all Student Work for any purpose whatsoever, including but not limited to, commercial exploitation and the preparation and exploitation of derivative works therefrom.

All intellectual property created by faculty, staff, or administrators, e.g., course curricula, are considered sole property of WQU.

Academic Freedom

WQU adheres to the principles of academic freedom. As a higher education institution, WQU holds the pursuit of education in highest regard and strives to provide an environment that promotes the pursuit of truth and mutual respect to support the generation of new knowledge and reasoned argument based on scholarly justification.

Students and faculty are expected to adhere to academic honesty, the highest ethical standards, and professional conduct in all processes and practices. It is reasonable that the teaching and learning environments will be open to diverse opinions and voices and that the same course

content can be presented in multiple ways to achieve the same course and program outcomes. Teaching and learning styles may differ and it is not unexpected that differences in styles, opinions, and approaches may occur. Academic freedom and student conduct policies are appropriately balanced to produce a harmonious learning environment.

Toward these ends and in respect for diversity, the following guidelines should be followed:

- WQU recognizes that each Instructional Team member will express his or her opinions and philosophies freely without censorship.
- Concurrently, it is important that Instructional Team members realize their responsibility to the University to make their students understand that their expression does not represent the opinions of WQU.
- The thorough discussion of topics from diverse perspectives within the Instructional Team members' subject areas is encouraged. However, the discussion of controversial subject matter outside of each Instructional Team member's area of expertise is strongly discouraged within courses.
- Noting that debate is at the heart of academic freedom, Instructional Team members have a particular obligation to promote conditions of free inquiry and to further public understanding of academic freedom.
- WQU expects its Instructional Team members to maintain high standards of professional conduct in all communications with students at all times.

VII. Learning Environment

WorldQuant University is a distance education institution where all program learning goals are achieved online. All curricula are designed using an online learning and instructional design principles. Students engage with multimedia content (video lectures, online presentations from guest lecturers, online live sessions, lesson notes, Jupyter notebooks on virtual machines) via the online learning platform to master course and program outcomes, and complete online learning activities and assessments required to earn credits and complete their programs.

Course Characteristics

The following characteristics are shared by all the courses in the Master of Science in Financial Engineering program:

Course Length: The length for completing each course in the program is either seven (7) or eight (8) weeks. Each subsequent course in the Program starts two weeks from the end date of the previous course. One week is used to finalize the grading process, and the second is for the students to register for their next upcoming course. The final *Capstone Course* is ten (10) weeks long. The length of each course is specified on the WQU website, in the last section of this Catalog, and in the course syllabus.

Course Times: Courses are scheduled to begin on a Tuesday and conclude on a Monday. Accordingly, each learning week in the course begins on a Tuesday and ends on a Monday. Deadlines for weekly activities are set according to this schedule as detailed in each course syllabus and the student course calendar.

Course Facilities and Equipment: All course activities are completed remotely using a personal computer and a reliable Internet connection. More information about technology requirements is described below.

Methods of Interaction between Students and Faculty: Students interact with the Instructional Team via online through discussion forums available in the University's proprietary Learning Management System (LMS). Students use these discussion forums to ask questions on course topics. The Instructional Team uses these discussion forums to answer student questions or post additional information. Students can also communicate with their Instructional Team via email. The email addresses for all Instructional Team members teaching a course are available in the course session landing page. In addition to the discussion forums, during the Capstone course students use a dedicated Slack environment that enables a closer connection with the faculty mentoring their capstone project. The Instructional Team answer students' questions within 24-48 hours.

Technology Requirements

Students are required to have **access to a computer** capable of streaming video from the Internet and a **high-speed internet connection** to participate and benefit from the online Program and course content.

To navigate the WQU learning platform, students need access to that the latest version of any of the following browsers:

- Google Chrome (this browser is required for proctored exams)
- Mozilla Firefox
- Microsoft Edge
- Safari

All Lesson Notes can be accessed via the WQU learning platform. Students may also download a PDF version of the Lesson Notes. The PDF version can be opened using Adobe Acrobat Reader, which is available at no cost to students at www.adobe.com.

Electronic communication is the preferred medium for students, faculty, and staff. Students, faculty, and staff are required to maintain email access with the capability to send and receive attached files.

WQU strives to prevent the spread of computer viruses by employing the latest virus detection software on all University-owned computer systems; however, WQU makes no guarantee related to the unintentional propagation of computer viruses that may go undetected by our virus detection software.

WQU will not be held liable for any direct, indirect, incidental, special, consequential, or punitive damages of any kind, including but not limited to loss of data; file corruption; or hardware failure resulting from the effect of any malicious code or computer virus unintentionally transmitted by the University staff members, faculty, students, or affiliates.

WQU strongly recommends and urges all faculty and students to seek out and install adequate virus detection software and to routinely check for, and install, the most recent updates to their anti-virus software no less frequently than once each month for their computer and operating system.

Student Orientation Course

Upon acceptance into the WQU MScFE program, all new students are required to take an Orientation Course before they begin their studies. The Orientation Course takes about 4 hours

to complete and includes an introduction to e-learning, online platform navigation, tips on time management, information on how coursework and assessments are organized, and more information about the curriculum, links to free resources on how to conduct research, and guidelines on academic writing and how to avoid plagiarism. Students are required to complete a quiz at the end of each section and to earn a minimum of 80% final grade to be able enroll in the first course in the Program.

Online Library and Learning Resources

WQU provides students with 24/7 access to the Library and Information Resources Network (LIRN) via a link within the online learning platform. LIRN provides extensive library resources with access to a collection of trade journals, scholarly journals, reports, magazines, and newspapers focused on finance, trade, and business as well as more general subject areas (i.e., ProQuest databases).

Through the LIRN link, students also have access to professional librarians who provide research assistance, information literacy instructions, and training to help them effectively navigate the available information and find what they need for their research assignments. Information on how to contact the LIRN librarian can be found in the Orientation Course and on the LIRN library home page.

Student Identity Verification - Online

Students must use their personal account (username and password), created at the beginning of the application process, to access the WQU learning platform and to complete activities to earn credits. As required by the Student Code of Conduct, students are responsible for maintaining the security of their own username and password to access the WQU Learning Platform and are accountable for changing passwords periodically to maintain security.

End-of-Course and Annual Surveys

At the end of each course, students are invited to complete an end-of-course survey. These surveys are anonymous to allow students to express their suggestions and feedback freely. Findings from these surveys are used to improve the course curriculum, its delivery, and the overall student experience at WQU. At the end of each year, an anonymous annual survey is sent to all students to collect feedback on a broader range of topics.

VIII. Student Support Services

WorldQuant University is dedicated to assisting students as they progress through the Program. The Student Support Team resolves any technical issues and either responds to administrative issues or escalates them to the appropriate entity (i.e., Registrar, Academic Dean).

Student Support

Students can access technical and administrative information through the WQU [Help Center](#). The available Help Articles provide answers to common questions and issues.

If the Help Articles do not sufficiently address the problem, students can submit queries via a chatbot located in the bottom right corner of any page in the WQU Learning Platform (students must click on the 'Talk to a Person' button to ensure that the message is viewed by a Student Support Team member). WQU Student Support will respond within one to two (1-2) business days.

Transcripts Request Policy

Student records, including academic transcripts, are protected by FERPA. Only students may request a copy of their own academic records.

Students may request to receive their transcripts or that they be submitted to another institution or an employer by sending an email to admissions@wqu.edu. The Registrar typically processes these requests within one (1) week of receipt of the request.

Transcripts that are submitted to WQU by other institutions for the purpose of matriculation or transfer credit requests become the property of WQU and cannot be returned to the student or forwarded to other institutions. Under federal policy, students have the right to view the documents in their files; however, WQU is not required to provide physical copies of these documents.

Should a student wish to transfer credit from WQU to another institution, the student is advised to first contact the receiving institution because all colleges and universities have their own transfer credit policies

Notice on Transferability of Credits

Transferability of credits earned at WQU is at the sole discretion of the receiving institution.

Change of Contact Information

Students are required to always maintain a current email address and mailing address on file with WQU. Students are responsible to promptly submit an update request to Student Support (<https://intercom.help/wqu/en/>) whenever there is a change.

Career Advising

WQU is committed to providing agile, tenacious, and adaptable quant talent with a challenging, multicultural and innovative opportunity to solve the problems of the future.

WQU's Program prepares students to advance their careers in risk management, investment banking, private equity, hedge funds, data science, and technical operational areas of corporate management. With its global perspective on the industry, WQU encourages students and graduates to consider non-traditional career paths in developing markets. Throughout the Program, there is a strong focus on peer-to-peer collaboration to foster soft skills such as teamwork and critical thinking.

WQU works to develop resources that help geographically distributed graduates to find prospective career partners and employers in their areas. Upon graduation, students are invited to the University's online Alumni Community, where they are encouraged to network, access and share tools and work opportunities for professional growth, form groups, engage in discussions, and to keep up with current industry thinking and resources. However, it is important for students to know that neither job placement nor internships are guaranteed.

Other than that, which is incidental, WorldQuant, LLC and its affiliates cannot derive any private benefit from WQU. In accordance with representations made to the U.S. Internal Revenue Service, WorldQuant, LLC and its affiliates cannot pursue any WQU students or graduates for any employment, consulting engagement or other similar opportunity until at least 12 months after the earlier to occur of (x) the student's last day as an enrolled student at WQU and (y) the student's graduation date from WQU.

Student Email Policy

WQU does not provide student email addresses; therefore, students must use their personal email to communicate with the University. To help ensure that emails from students to the institution or faculty are received and responded to quickly, it is required that students comply with the following email policy standards:

- The email address should be personally identifiable (e.g., include first "given" name and last "family" name);

- Digital signatures or images are not allowed;
- Automatic legal notices, disclosures, disclaimers, or quotations (motivational, religious, or otherwise) are not allowed;
- Providing links to businesses is prohibited.

Failure to comply with the above requirements increases the risk that an email will be caught in a spam filter. Furthermore, by not adhering to the email policy standards, the Student Support Team will not have the information needed to find a student's account thereby making it challenging to identify the question or concern within the email.

Students are encouraged to create an email address for use during the MScFE program using any free email service available in their area, or to configure their personal email address to meet the WQU email policy requirements.

MScFE Diploma

Upon successful completion of all the courses in the MScFE degree program, the Registrar verifies the fulfillment of the graduation requirements. If all requirements are met, students will receive digital diploma and official transcripts **via email**.

FFE Certificate of Completion

Upon successful completion of the first two courses in the MScFE Program, if satisfactory academic progress requirements are met, students will receive a digital "Foundations of Financial Engineering" Certificate **via email**.

IX. MScFE Program

WorldQuant University offers a Master of Science in Financial Engineering degree program that allows students to earn an embedded credit-bearing Foundations of Financial Engineering (FFE) Certificate (non-degree) Program upon completion of the first two courses.

To graduate from the MScFE Program, students must earn 39 semester credit hours and complete the Program in good academic standing. WorldQuant University expects students to complete the courses and earn the required credits for graduation in two (2) years (normal time to completion). The Maximum Time Frame permitted to complete the Program is three (3) years, corresponding to 150% of the normal time to completion.

WQU also expects students to complete the FFE Certificate Program within six (6) months, though a Maximum Time Frame of nine (9) months, i.e. 150% of the intended time to completion, is granted if needed.

In support of its mission, WorldQuant University offers fully online programs at no cost to qualified students meeting the admission requirements.

Program Description

The Master of Science in Financial Engineering program provides students with advanced knowledge and skills in disciplines needed for industry success in the field of quantitative finance and beyond. The Program begins with an overview of financial markets and continues by exploring how to use Python and econometric tools to manage financial data, allowing users to identify risks and develop mitigation strategies. The Program teaches students how to run simulations using Python algorithms and manage portfolios and their risk profiles. This Program builds from a strong theoretical base, including regression, pricing, hedging, and time-series models, and encourages application-based learning across areas such as stochastic modeling and machine learning technologies. Students are encouraged to engage with current trends of the global financial landscape to produce innovative research and projects - preparing them to join the quantitative finance industry.

Program Outcomes

Upon completion of the Program, students will be able to:

- **Computational Skills:** Build proficiency with Python modules, data structures, and machine learning algorithms as applied to financial engineering.
- **Statistical Skills:** Build hands-on skills summarizing and modeling both structured and unstructured financial data, and using the data for modeling in econometrics, machine

learning, and deep learning.

- **Mathematical Skills:** Apply probability, linear algebra, and stochastic calculus techniques to solve pricing, hedging, prediction, and optimization problems.
- **Financial Skills:** Develop a quantitative and computational toolkit of methodologies to address financial challenges of credit risk, volatility, liquidity, leverage, regulation, and model breakdown with ethical principles in mind.
- **Collaboration and Critical Thinking Skills:** Analyze and solve financial problems by engaging in practitioner-oriented group work assignments and project-oriented problems applying collaborative and critical thinking skills.
- **Communication Skills:** Create clear and concise technical and non-technical reports that explain and interpret model results and recommend courses of action using various physical and digital media.

Program Requirements

The two-year MScFE program is composed of nine (9) content courses and one (1) Capstone course. Each course is sequentially taught and builds on the previous ones.

The table below lists the courses required to complete the MScFE program as well as the FFE Certificate Program in the prescribed sequence:

Prescribed Course Sequence			
Course Code	Course Title	Course Length (Weeks)	Credits
MScFE 560	Financial Markets	7	4
MScFE 600	Financial Data	7	4
<i>*Upon completion of the first two MScFE courses with a cumulative average score of 80% or higher, students earn the "Foundations of Financial Engineering (FFE)" certificate.</i>			
MScFE 610	Financial Econometrics	7	4
MScFE 620	Derivative Pricing	7	4
MScFE 622	Stochastic Modeling	7	4
MScFE 632	Machine Learning in Finance	7	4
MScFE 642	Deep Learning for Finance	7	4
MScFE 652	Portfolio Management*	8	4
MScFE 660	Risk Management	8	4
MScFE 690	Capstone Course	10	3
Total			39

**As an additional requirement to enroll in the MScFE 652 Portfolio Management course, students must complete the "Delivering Impactful Presentations" Workshop (not for credit). Specifically designed for*

financial engineers, this **self-paced** Workshop presents best practices in slide deck creation, strategies on how to integrate storytelling, and tips on how to deliver a presentation. Students are automatically enrolled in the Workshop when they register in the MScFE 632 Machine Learning in Finance course.

Course Descriptions

MScFE 560: Financial Markets (Length: 7 Weeks)

In this pilot course for the MScFE program, students are introduced to the world of professional finance: markets, products, participants, and regulation. The activities within financial markets will be discussed, including trading, financing, brokering, pricing, hedging, optimizing, and managing risk. Throughout the course, students identify a list of significant factors that affect the financial industry. Students will be able to interact with spreadsheets that illustrate these concepts. Students will explore the rich variety of asset classes including rates, equities, cryptocurrencies, credit products, derivatives, ETFs, securitized products, real estate, commodities, and FX. Understanding the asset classes, activities, and influential aspects of the financial landscape will provide a solid foundation on which students will build mathematical and computational tools to develop models for financial engineering. No background in finance is required. **(Embedded FFE Certificate: Course 1)**.

MScFE 600: Financial Data (Length: 7 Weeks)

This course introduces students to empirical data that can be used for decision making and predictions in finance. Data sets include traditional time series of financial series and macroeconomics, as well as alternative data including text, social media, images, geolocation data, and climate data. Students will learn how to apply Python to properly select, import, filter, structure, visualize, summarize, and analyze data sets for interest rates, equities, cryptocurrencies, ETFs, securitized products, and other asset classes. Students will also learn how to prepare both numeric and non-numeric data to be used in models for financial markets, including fundamental analysis with accounting data, technical analysis with trading data, statistical analysis with transformed data, and sentiment analysis with textual data. The course builds upon the prerequisites of the program by illustrating how linear algebra, probability and statistics can be used to transform and filter data, and impute missing values, so that data is model-ready. Emphasis will be given on several matrix transformations that provide normalization, transformation, reduction, factorization, and interpolation to enhance the data's effectiveness in models. In addition, visualization techniques through Python will develop the presentation of data for both technical and non-technical audiences. The ultimate goal of this course is to build foundational skills that enable students to understand the type of data needed depending on their goals, how to source it, structure it, process it, build with it, and discover what it tells. At their best, financial engineers turn a rich variety of data into empirically based, well-calibrated financial

models whose output provides traders, portfolio managers and risk managers with sound decisions in the uncertain world of finance. **(Embedded FFE Certificate: Course 2).**

To earn the Foundations of Financial Engineering Certificate, students must:

- Successfully complete the first two required courses in the MScFE Program
- Earn a total of 8 semester credit hours
- Be in academic good standing:
 - ✓ Obtain an average score of 80% or above
 - ✓ Complete the first two courses in the MScFE Program within the Maximum Time Frame (MTF) of nine (9) months

Once completion requirements have been verified, the student will receive a digital certificate of completion.

Students meeting the FFE certificate completion requirements can continue studying in the MScFE Program by registering in the third program course.

*(*FFE Certificate Program description and program outcomes are reported at the bottom of this section.)*

MScFE 610: Financial Econometrics (Length: 7 Weeks)

This course provides a comprehensive introduction to financial econometrics. Students will learn how to model probability distributions of returns, including graphical, Bayesian, and non-parametrical methods. They will also learn how to model univariate time series, focusing on their moving average, autocorrelations, and volatilities, including GARCH models. Students will build additional tools to see how two financial series can relate to each other, using correlation, vector autoregressions, and cointegration. Further, they will build the statistical foundation and Python coding skills to run econometric models to apply in financial decision making. Finally, they will see how the ideas of bias, variance, and overfitting apply to machine learning.

MScFE 620: Derivative Pricing (Length: 7 Weeks)

Derivative Pricing is a hands-on course focused on pricing options. Students will build a conceptual background that deepens their understanding of why classical calculus is not sufficient for detecting rates of change in stochastic processes. Course content focuses on the concept of no-arbitrage and perfect replication using the world of stochastic calculus, including the Black-Scholes Model. Students will be able to construct pricing models such as binomial trees and finite difference methods to price an array of vanilla and exotic options. They will also measure sensitivities of the price to variables, such as the underlying price, volatility, time, interest rates,

and carry costs. Finally, some extensions to classical models, such as the Heston Model and jump models will be addressed. Much of the course will include Python illustrations to build practical skills.

MScFE 622: Stochastic Modeling (Length: 7 Weeks)

In this course, students increase their knowledge of modeling stochastic processes. Students will investigate advanced volatility models that upgrade Black Scholes parameters to variables, increasing their stochastic modeling skills to address heteroskedasticity and variable costs as well as jump diffusions. Students will dive into Markov processes, including hidden Markov process and Markov decision process to financial applications, and will build a mathematical foundation for deep learnings, a tool they will use for machine learnings. Overall, students will be able to evaluate the assumptions, benefits, and difficulties associated with stochastic models.

MScFE 632: Machine Learning in Finance (Length: 7 Weeks)

This course addresses the fundamentals of machine learning. It continues the topics from the Financial Econometrics course whereby students will be able to apply algorithms to learn from data. Students will cover the mathematical and computational foundations of both the supervised and unsupervised machine learning problems, and they will use Python modules and a Tensorflow framework to predict, explain, or compare outcomes across different financial series. Students will apply machine learning techniques to determine if financial models are overfit, and use methods of regularization, cross-validation, and resampling techniques to mitigate it. In addition, students will develop a theoretical and practical background in deep learning models to improve the power of their financial model predictions.

MScFE 642: Deep Learning for Finance (Length: 7 Weeks)

Directly building on their skills from Machine Learning, students will further explore neural networks in Deep Learning for Finance. Students will build mastery in Python with TensorFlow to build and train neural networks and apply them to real life financial examples. They will expand their toolkits to perform regularization. During this course, students will use various algorithms to tune hyperparameters, including classical, Bayesian, and stochastic methods. Different neural network architectures will be addressed, particularly CNNs (Convolutional Neural Networks), RNNs (Recurrent Neural Networks), LSTMs (Long Short-Term Memory), and GRUs (Gated Recurring Units). These neural networks will be built from scratch, then illustrated in financial examples such as predicting stock prices, discovering investment factors, and back-testing trading strategies. Students will apply state-of-the-art techniques such as transfer learning and data augmentation. These methods will be used to improve the learning capability and performance of the networks, resulting in better predictions. In addition, students will learn the theory behind

these tools, as well as richly exploring how to combine architectures with optimization techniques applied to real world data for comprehensive intraday trading strategy development.

MScFE 652: Portfolio Management (Length: 8 Weeks)

This course provides students with methodologies and skills to perform portfolio optimization. From the previous coursework, students will have a solid foundation on which to engage in the portfolio management process. In the first two modules, students will review classical methods of portfolio theory, including Markowitz portfolio optimization. Subsequent modules address more modern versions of the portfolio optimization process, including Black-Litterman, probabilistic scenario optimization, prospect theory, Kelly criterion, and risk parity. In addition, advanced econometrics and machine learning methods will be applied to the classical techniques, including the use of neural networks, genetic algorithms, information theory, and reinforcement learning. The course requires students to engage with the mathematical foundations, code implementation, and practical applications of portfolio management across many asset classes.

MScFE 660: Risk Management (Length: 8 Weeks)

This course provides students with both classical and modern methods of modeling and managing risk. The course begins by reviewing metrics and models for market, credit, and systemic risk, and applying these ideas to multiple asset classes, including derivatives. Machine learning methods will be integrated with both classical methods like VaR and GARCH and with robust methods like Extreme Value Theory. Then a comprehensive review of Bayesian methods will be given that builds towards a Bayesian network of modeling systemic risk. By taking the course, students will be able to synthesize a complex network and scenario analysis for both portfolio risk and systemic risk.

MScFE 690: Capstone Course (Length: 10 Weeks)

The Capstone Course is designed to put the students' knowledge of financial engineering to the test. Students practically apply their understanding of the program content by accomplishing project milestones from developing a problem statement, identifying the required technology to find a solution to the problem, submitting multiple drafts for peer review and instructor feedback, and finalizing and presenting their fully developed project. The goal of the Capstone Course is to ensure that students have met the program outcomes and are able to apply their knowledge and skills to real-world scenarios.

Capstone Course Learning Outcomes

- **CO1:** Develop and complete a Capstone project by applying comprehensive financial engineering tools and methodologies learned throughout the Program;

- **CO2:** Analyze the financial engineering problem stated in the capstone project using critical thinking skills earned throughout the program and draw appropriate conclusions;
- **CO3:** Produce a video presentation of your project to communicate clearly to a non-technical audience the scope, findings, and interpretations of the project.

Capstone Project Requirements

During the Capstone Course, students are required to complete a Capstone Project by selecting one of the two types of tracks described below. It is important to emphasize that there is no difference in the deliverables to be submitted for the two tracks - both types require students to submit relevant working code on the related scope of work along with a detailed and professionally structured project report. The only difference is in the approach to the work and the problem addressed:

- **Capstone Research Paper (Research track):** Capstone research papers are expected to focus primarily on investigating, identifying, and analyzing financial engineering research topics, such as modelling market inefficiency, risk management, alpha generation, arbitrage, high frequency trading, business policy and strategy, entrepreneurship, asset pricing, or alternative investments. Students can select a topic in their area of interest and pick a geographic focus area where possible. The goal of a capstone research paper is to push the boundaries and generate insights that can lead to publications in peer reviewed journals.
- **Capstone Project (Practical track):** Practical Capstone projects are expected to involve the development of fully operational standalone trading systems, alpha generation modules, or execution strategies across equities, forex, derivatives, commodities, or bond markets. The goal is to take an existing bottleneck or pain-point faced by the industry and to devise a fully working solution that is functional, scalable, and reliable. Students are expected to use open standards technological stack for easy adaptability and explicitly test their solutions across realistic markets conditions and using multiple categories of financial instruments and geographies. Special attention is provided to the use of machine learning and artificial intelligence methods and to developing solutions/insights for average retail investors in emerging and frontier economies in Asia, Africa, and Latin America.

Although the approach to the work and the type of problem addressed is different, both capstone project types require students to submit relevant working code on the related scope of work along with a detailed and professionally structured project report.

At the beginning of the 10-week long Capstone course, students identify their own topic or select a topic based on a wide variety of project tracks provided in the online course room and submit a problem statement. Once approved, students are required to complete a literature review and competitor analysis to consolidate their project proposal, which then they will develop into a draft project and the final project. Students will work in groups of a maximum of three peers. The scope of the project is commensurate to the number of students completing it. The final project consists of a paper in article format and source code submitted separately with appropriate comments.

Each student or group of students is assigned to a faculty member of the Instructional Team teaching the Capstone Course, which mentors and monitors students throughout the duration of the course.

By the end of the course, each student is required to prepare and submit their own recorded presentation independently, regardless of whether they have been working in a group. The student presents the overall project, describes the results obtained, the conclusions, and possible future developments of the Capstone project topic they have developed.

FFE Certificate Program

Program Description

The Foundations of Financial Engineering (FFE) Certificate Program provides students with two graduate level courses that prepare them with the concepts and skills to acquire, process, structure, visualize, and prepare data for financial models. Students understand the complexities of financial challenges such as financing, volatility, correlation, non-linearity, leverage, liquidity, regulation, and model failure. Students gain experience in identifying sources of both traditional financial and economic time series as well as a wealth of alternative transaction-generated, machine-generated, or user-generated alternative data, and learn methods to process, filter, transform numeric and non-numeric data to make it suitable for using in financial models. This includes techniques for handling missing data, working with outliers, as well as multivariate data. By the end of the certificate program, students develop both strategic and technical skills in Python for visualizing and presenting data to both non-technical and technical audiences.

Program Outcomes

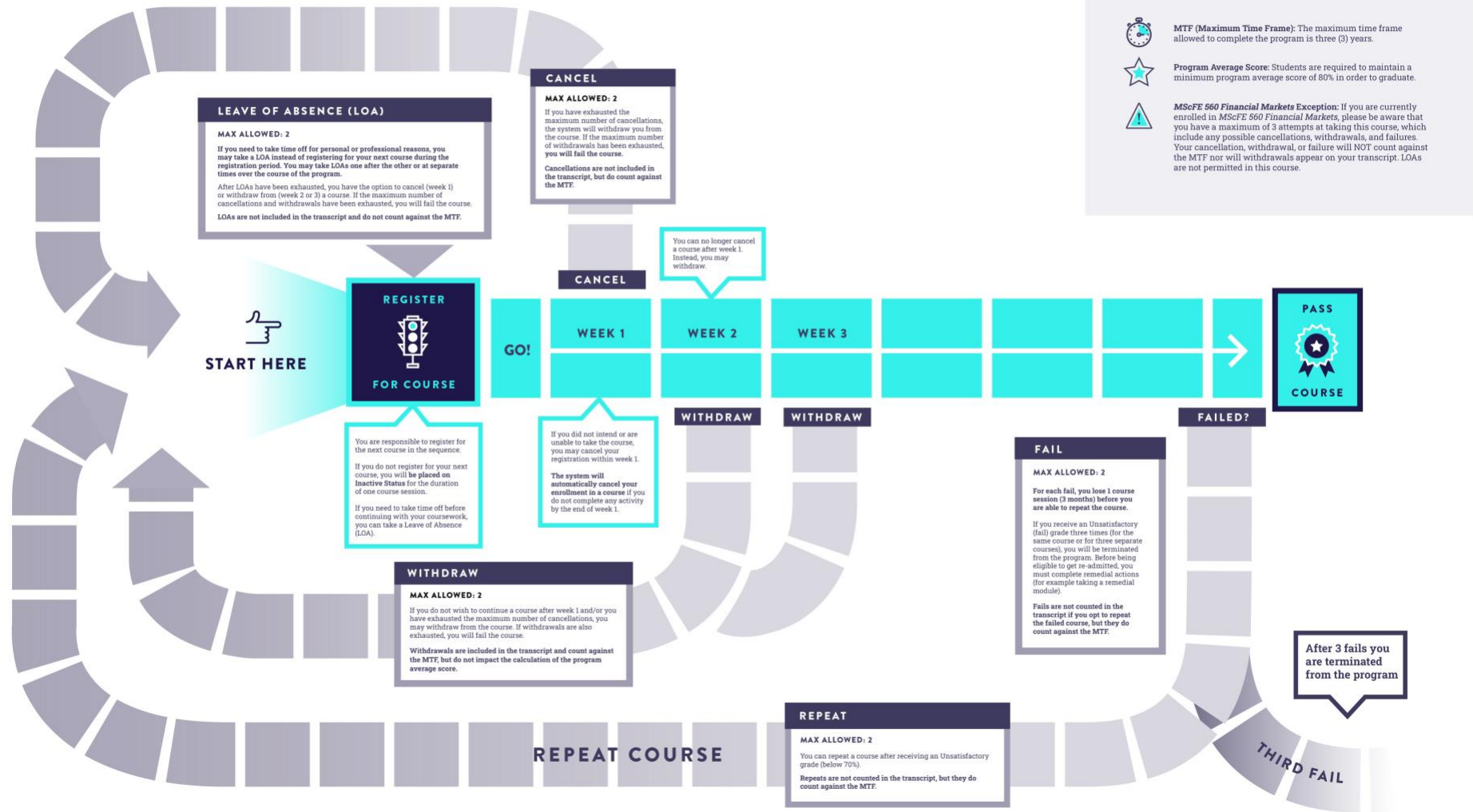
Upon completion of the Program, students will be able to:

- Build hands-on skills by applying linear algebra techniques using Python to summarize and filter both structured and unstructured financial data, to prepare data sets for models in econometrics, machine learning, and deep learning.

- Develop a quantitative and computational toolkit of visualizations and data transformations that prepares data for further investigation of the challenges of credit risk, volatility, liquidity, nonlinearity, leverage, regulation, and model failure with ethical principles in mind.
- Analyze and solve financial problems by applying collaborative and critical thinking skills and develop clear and concise technical and non-technical reports to clearly communicate results.

Appendix A – Student Journey

STUDENT JOURNEY



MTF (Maximum Time Frame): The maximum time frame allowed to complete the program is three (3) years.



Program Average Score: Students are required to maintain a minimum program average score of 80% in order to graduate.



MScFE 560 Financial Markets Exception: If you are currently enrolled in MScFE 560 Financial Markets, please be aware that you have a maximum of 3 attempts at taking this course, which include any possible cancellations, withdrawals, and failures. Your cancellation, withdrawal, or failure will NOT count against the MTF nor will withdrawals appear on your transcript. LOAs are not permitted in this course.