**MSc Financial Data Analytics**

Course Handbook for Postgraduate Students

Academic Year 2023-24

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## Introduction

### Welcome to the MSc in Financial Data Analytics at the University of Sussex!

This course has been developed and crafted to give you an exciting, challenging and rewarding experience to prepare you for the fast growing job market in Financial Data Analytics.

In designing this course we have made use of our world-leading expertise in Financial Mathematics, Informatics, Statistics and Data Analysis and comprehensive teaching experience to give you a cutting-edge curriculum.

At the end of the day, the MSc degree is all about your experiences, which should be both challenging and exciting. To further support and enhance your learning, we will be using a virtual learning environment, where you will be able to access all relevant material from taught modules, communicate with peers and module convenors and tutors. If you have any questions regarding your course, the course convenor and support staff from Postgraduate Office will always be on hand to help you.

This student handbook gives you an overview of the key contacts, the course structure, the details of the modules taught in the course, and examples of opportunities this degree will provide.

In addition to this handbook, the *Student Handbook* www.sussex.ac.uk/students/handbook provides you with university-wide information.

**We are very happy and excited to welcome you to this course and we hope that you will enjoy studying here and actively participating in the life of the University!**



Dr Yuliya Kyrychko
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Course Convenor, MSc in Financial Data Analytics

# Course Information MSc in Financial Data Analytics

For the full details of module content, module aims, and learning outcomes, please visit
www.sussex.ac.uk/mps/internal/departments/mathematics/pg/pgcourses


This course comprises of comprehensive **'core' training** in financial mathematics, programming, data analysis methods, elements of financial portfolio analysis, analysis of various financial models with applications in finance and the wider industry, and machine learning. This is covered by **6 core modules**:


Autumn Term:

- Financial Mathematics (G5078)
- Computing for Data Analytics and Finance (854G1)
- Data Science Research Methods (970G5)


Spring Term:

- Financial Portfolio Analysis (849G1)
- Mathematical Models in Finance and Industry (832G1)
- Machine Learning (934G5)


This is complemented by training provided by optional modules, which allows you to choose between statistics-oriented modules and financial modules – **you must choose one optional module** in each term. The optional modules are:


Autumn Term:

- Data Analysis Techniques (890F3)
- Algorithmic Data Science (969G5)
- Linear Statistical Models (971G1)
- Programming in C++ (898F3)
- Probability Models (973G1)

Spring Term:

- Financial Investment and Corporate Risk Analysis (861G1)
- Monte Carlo Simulations (865G1)
- Random Processes (862G1)
- Statistical Inference (867G1)
- Numerical Solution of Partial Differential Equations (845G1)


No matter whether you choose to do further studies or built a career in industry, a crucial training of any graduate is the ability to work under guidance as well as independently on a project and produce reports with your findings. This course provides you with such training through a **core Dissertation module**, which runs in the Summer Term. This module will give

you an excellent and exciting opportunity to choose the topic which you like, apply financial data analytics methods to address a substantial research problem, and present the results of your analysis in a detailed report.

## Choosing your modules

You will be able to select your option modules when you register online. If you require any help with choosing your modules, please contact the course convenor (Dr Yuliya Kyrychko, y.kyrychko@sussex.ac.uk ) and they will be happy to assist you with choosing the options.

If you are unhappy with your choice of optional modules, you can apply to change one or more of your modules. In order to do this, you must contact the School Office mps-pgtoffice@sussex.ac.uk This must be done by the end of Week 2. **Important:** No option changes are possible after Week 2.

## Key Contacts

The course is managed and developed by the Department of Mathematics within the School of Mathematical and Physical Sciences, and the course convenor is Dr Yuliya Kyrychko (y.kyrychko@sussex.ac.uk).

Additional help is provided by the School Office for the School of Mathematical and Physical Sciences, which can be contacted via mps-pgtoffice@sussex.ac.uk

## Mode of Attendance

**Full time, One year**

The **academic year** runs from September to September and comprises of the Autumn, Spring and Summer terms. Lectures take place during the Autumn (September-December, Weeks 1-11) and Spring (January-April, Weeks 1-11) terms. Details of the term dates can be found at

https://www.sussex.ac.uk/about/term-dates

**Exams** are held each year in January (assessment period A1) and May-June (assessment period A2), after which the dissertation is being prepared during the Summer term (June-August). The details of assessment for each module are presented are given at

www.sussex.ac.uk/mps/internal/departments/mathematics/pg/pgcourses

The attendance is compulsory and students are expected to be available for attendance at the University throughout the year.

**Resit examinations** normally take place at the end of August- beginning of September during the assessment period A3.

The graduation ceremony takes place at the end of January each year.

## Assessments

The course uses a number of different modes of assessment including unseen examinations, coursework, project work and dissertation. The details of assessments for each module are presented in can be found at
www.sussex.ac.uk/mps/internal/departments/mathematics/pg/pgcourses

In order **to pass** a particular module you will need a mark of at least **50%**. This mark may be derived from a single exam or as the weighted average of several units of assessment (exam, coursework, etc.). Coursework is submitted during the period of the module and all submission dates will be provided to you in advance. Formal submission dates are noted on your Sussex Direct pages (https://direct.sussex.ac.uk).

Please note that module convenors and tutors are not allowed to provide extensions or make any changes to the official submission deadlines.

We encourage you to regularly check your study timetable in Sussex Direct and e-mails. The MSc Dissertation is submitted on a specified date during the Summer Term. Your Sussex Direct account will tell you how to submit the dissertation (usually via Canvas).

## Submission of coursework and feedback

Modules are offered across different departments. Each module has its own procedure for handling coursework and the module convenor will provide detailed information to you regarding the submission of coursework.
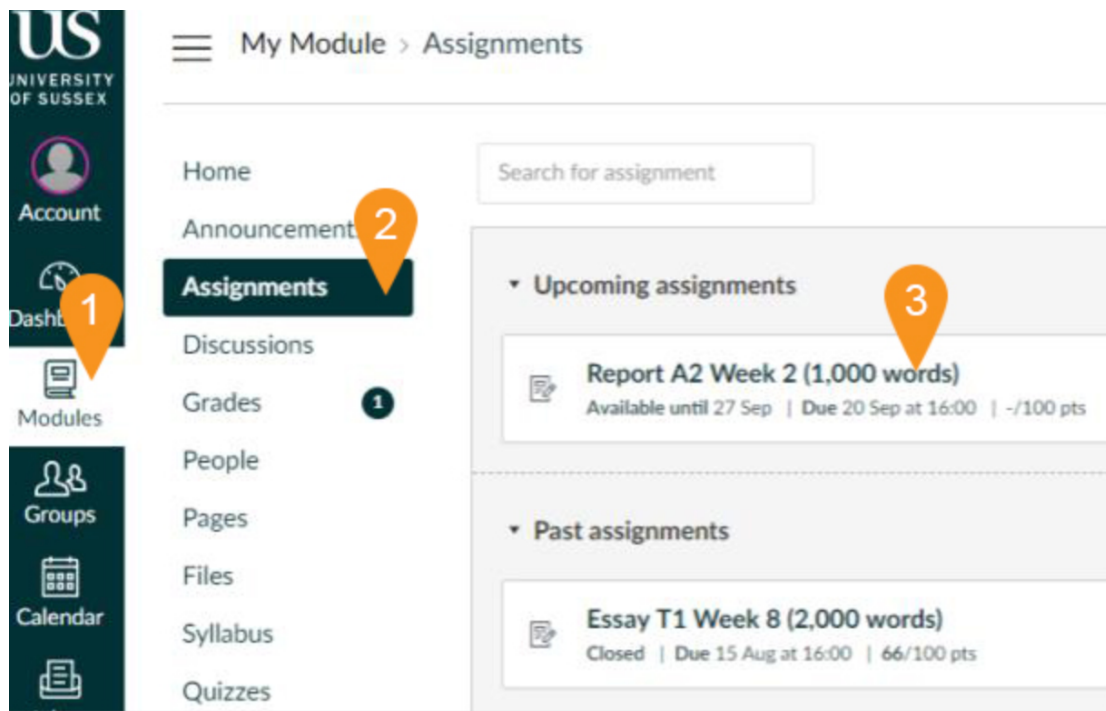
Online submissions

Each module of this course will have its own Canvas webpage. You can view all of your Canvas modules by logging into https://canvas.sussex.ac.uk

If you need to submit your assessment through Canvas, please follow the following procedure:

- Login to Canvas and select the module you wish to submit your work to from either the'**Dashboard**' or '**Modules**' page
- Select the '**Assignments**' tab from the module navigation menu. Each assignment includes a **Due** date and time (deadline for submission) and **Available until** date and time (deadline for late submissions).

- Select the assignment you wish to submit to. When the page opens, you will see further information on the assessment and instructions for the submission.



For further information regarding online Canvas submission of assignments, please visit

https://canvas.sussex.ac.uk/courses/14493/pages/submitting-canvas-online-assignments

It is important that all submission deadlines are met. The University applies a system of penalties to assessments that are submitted late. For more details, please consult the University Examinations and Assessment Regulations:
http://www.sussex.ac.uk/adqe/standards/examsandassessment

You can make an exceptional circumstances claim if you experience something sudden, temporary and unforeseen, which could have an impact on one of your assessments. If you would like to submit an exceptional circumstances claim, please visit
https://student.sussex.ac.uk/assessment/exceptional-circumstances

## Feedback to students

There are a number of ways in which you will receive feedback regarding your progress:

- **Marked coursework** - you will get feedback each time you have a coursework marked, which can be accessed through Canvas and during a lecturer's feedback/student office hour.

- **Lecturers' feedback hours** - for details, please search Sussex web pages for the relevant staff member and their feedback/student hours for the week will be displayed.

## Support for your learning

### Canvas

Each module in the course is supported by its own Canvas webpage. This virtual learning platform is used by students across the University, so you will never feel alone. Please make sure that you familiarise yourself with Canvas as it is the key source of module information. In order to sign in into Canvas, please visit http://canvas.sussex.ac.uk

### Email

All students are given a Sussex email address when they start the course. We will be communicating with you about your course through the Sussex email address, so it is crucial that **you check your email every day**.

In addition to your MSc course convenor, you will have a dissertation supervisor. If you have any queries with a specific module, you should contact the module convenor during their advertised feedback/student office hours. You can also get valuable information, advice and support from the Student Centre (https://student.sussex.ac.uk/centre/). They can help you with many issues including:

- personal concerns affecting study progress or well-being;
- funding and finance including scholarships, bursaries and hardship funds;
- sources of help to improve academic performance – identifying obstacles to learning;
- understanding university systems and regulations in relation to assessment, services, complaints, conduct, and discipline;
- progression, intermission and withdrawal processes;
- referrals to other professional services on campus;

## Study Skills and Resources

### Turnitin

Turnitin is an online 'text matching' tool that compares a student's work to a huge database of other files and shows where there are strong similarities. It is often referred to as plagiarism detection software.

### Skills Hub

The University's Skills Hub gives advice on writing well, including hints and tips on how to avoid making serious mistakes. Visit and make use of the resources there. You will also find helpful guides to referencing properly and improving your critical writing skills.
http://www.sussex.ac.uk/skillshub/?id=1

## Referencing

These are some useful websites and places to go to for advice on how to reference essays and dissertations:

- Skills Hub website on referencing http://www.sussex.ac.uk/skillshub/?id=251
- Use the resources on Canvas pages of your modules.

## Student Support Unit

The Student Support Unit is a team of specialist advisors who work with students who may need support at the university due to a long term condition.
http://www.sussex.ac.uk/studentsupport/

## Academic Development Support

The Sussex Language Institute runs free 'English Language and Study Skills Support' sessions for international students, including in-depth guidance on referencing. There is also advice on how to reference using the Harvard, Vancouver, Numeric and MLA referencing styles.

http://www.sussex.ac.uk/languages/english/acadev

## Academic Integrity and avoiding Academic Misconduct

### Academic Integrity

The University of Sussex has a set of Academic Integrity Values which all students are expected to follow. These values are:

- **Honesty**: The work you produce for assessment is your own and where you have used other's work, this is clearly acknowledged: this is done by adding references to your assessments.
- **Trust**: Your tutors and fellow students can trust you to be honest about the work you produce and submit for assessment.
- **Fairness**: You agree that all students should be fairly treated and that you do not try to gain advantage by not producing your own work for assessment.
- **Respect**: You treat other members of the academic community with respect: fellow students, your tutors and the admin staff.
- **Responsibility**: You take responsibility for your own learning and follow the University of Sussex Academic Integrity values and assessment regulations.

### Academic Misconduct

Academic misconduct includes

- collusion
- plagiarism

- personation

- misconduct in unseen exams

- fabrication of results

There are strict rules on academic misconduct and penalties are severe. The University's regulations and policy on Academic Misconduct are published in Section 2.9 of the Examination and Assessment Regulations Handbook available on the following web pages: http://www.sussex.ac.uk/adqe/standards/examsandassessment

Guidance on avoiding academic misconduct can be found Skills Hub https://student.sussex.ac.uk/complaints/against-you/misconduct

## Your module feedback

You will receive an email mid-term and at the end of each term to participate in the module satisfaction survey. The survey is not only feedback of good and bad elements of the module, but is an opportunity for us to hear how we can improve the modules we offer. Therefore, your participation in the survey is very important and helpful. It is worth noting that your feedback is anonymous.

In addition to the formal student satisfaction surveys, you are encouraged to talk to your lecturers during their student office hours, if you have any concerns about the module. You can also discuss any concerns you have with the Course Convenor, Dr Yuliya Kyrychko (y.kyrychko@sussex.ac.uk) or the Head of Department, Professor Peter Giesl (P.A.Giesl@sussex.ac.uk).

You can also give feedback to your student representative. Student reps are democratically elected to represent their peers. They enable a useful and effective communication link between staff and students. They provide helpful feedback to staff on modules, raise concerns in a constructive manner, give feedback to other students on why particular decisions are made, and can help to pre-empt concerns becoming serious issues.

To find the details of your student rep, please check the noticeboard in the school, or visit:

http://www.sussex.ac.uk/mps/internal/departments/mathematics/studentreps

**We hope that you thoroughly enjoy your course and have fun and productive time at Sussex!**