Introduction: MCom Financial Economics

The University of Johannesburg’s master of Financial Economics by coursework programme represents a unique academic offering in South Africa. The programme is structured to replicate similar quantitative finance-based masters’ programmes at top universities in the United States and Europe. The programme is offered in partnership with the University of Ohio in United States, and provides a unique opportunity for South African students wanting to obtain a masters’ degree in financial economics conferred either by the University of Ohio, or by the University of Johannesburg. Students interested in obtaining a master’s degree in financial economics conferred by the University of Ohio should take a few modules offered at UJ by UJ Professors before they may continue with the rest of the modules at the University of Ohio. More details about the University of Johannesburg - University of Ohio (1+1) master of financial economics offering can be found here.

The UJ based masters of financial economics programme is taught by some of the top financial economists from top Universities in the world. The programme comprises 12 months of intensive coursework and a 6 month mini-dissertation. During the coursework component, students are required to take modules in macroeconomics, international finance, risk management, portfolio theory, stochastic processes, options pricing, insurance risk modelling, financial econometrics, fixed income and derivatives markets, behavioral finance, and corporate valuations.
Faculty of Economic and Financial Sciences
Department of Economics and Econometrics

Information Brochure

M.Com (Financial Economics)
by Course Work

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1. Introduction
Since the 1950’s, economists have made steady progress towards establishing financial economics as a relevant and rigorous social science. The recognition of financial economics as a serious branch of economics was solidified in 1985, when Franco Modigliani was awarded the Nobel Prize in economics for his analyses of savings and financial markets. Other Nobel laureates in finance include Markowitz, Miller and Sharpe (1990, Modern Portfolio Theory), Merton and Scholes (1997, derivatives pricing), Engle (2003, ARCH volatility modelling), and Fama, Hansen, and Shiller (2013; the empirical analysis of asset prices). Today, financial economics is taught in universities and business schools all over the world.

The University of Johannesburg’s M.Com Financial Economics by coursework programme represents a unique academic offering in South Africa. The programme is benchmarked to replicate similar quantitative finance-based masters’ programmes at top universities in the United States and Europe. The M.Com comprises 18 months of intensive coursework and a 6 month mini-dissertation. During the course work component of the programme, you will be exposed to core theories of financial behaviour and decision making under uncertainty. Our students are equipped with the quantitative finance skills (maths, stats and econometrics), computer programming (Matlab, and R) and practical knowledge (research methodology) necessary for conducting high-level academic and professional research. Our modules are taught by some of the top financial-, micro-, and applied-economists in the world.

2. Profile of Some Lecturers in the Programme

- Professor Frank Riedel: is a Professor of Mathematics and Economics, and Director of the Center for Mathematical Economics at the Bielefeld University in Germany. He holds a PhD degree in Economics from Humboldt University; and a Masters’ diploma in Mathematics from Freiburg University in Germany. He is currently a visiting Professor at the University of Johannesburg where he lectures “Theory of Financial Markets” course in the M.Com Financial Economics programme. His research interests include Mathematical Economics, options pricing, and Mathematical Finance.

- Professor Ulrich: is a Professor of Economics at the University of Kiel, and research Professor at Kiel institute for the World economy in Germany. He holds a PhD degree in Economics, and a second PhD degree in Psychology from the University of Kiel, Germany. He is currently a visiting Professor at the University of Johannesburg where he lectures “Behavioral Finance” course in the M.Com Financial Economics programme. His research interests include health economics, decision theory and behavioral economics.
➢ Professor L Bonga Bonga: is a Professor of economics at the University of Johannesburg. He hold a masters’ in Economics from the University of Pretoria, and a PhD degree in Economics from the University of Johannesburg. His research interests include monetary economics and international finance.

➢ Prof JW Muteba Mwamba: is the coordinator of the M.Com Financial Economics programme, University of Johannesburg. He holds a masters’ and a PhD degree in Financial Economics from the University of Johannesburg. His research interests include asset allocations, portfolio theory, risk management (market, credit, operational, and liquidity risk models), investment theory, behavioral finance, climate change risks, financial econometrics, extreme value theory, copulas, and programming.

➢ Dr. Franck Adekambi: is a senior lecturer in the department of Economics, University of Johannesburg. He holds a PhD degree in Actuarial Science from the University of Laval, Canada, and a masters’ degree in Statistics from ENSEA - France. His research interests include insurance risks, actuarial science, and stochastic processes in finance.

➢ Dr. Charles G., Cadegon: was a research associate at the Ryerson University, Toronto, Canada. He holds a masters’ degree in Mathematical Statistics from the University of Michigan, Ann Arbor, and a Ph.D degree in Economics from the University of Cape Town. His research interests include decision theory, probability theory, behavioral economics, and derivatives pricings.

3. Degree Information

<table>
<thead>
<tr>
<th>Name</th>
<th>M.Com (Financial Economics) by Course Work (M3CFEQ)</th>
</tr>
</thead>
</table>
| Pre-requisites                | o Relevant SAQA accredited NQF 8 Honours Degree with a minimum aggregate of 63 percent or an average determined by the DEE¹.  
                               | o Entrance course exam mark of 60 percent or an average determined by the DEE. |
| Module NQF level              | 9 (old level 8)                                     |
| NQF Credits                   | 180                                                 |

¹ Department of Economics and Econometrics
4. Module Information before 2018²

<table>
<thead>
<tr>
<th>Module</th>
<th>Code</th>
<th>Duration</th>
<th>Timing</th>
<th>NQF Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1. Financial Economics</td>
<td>FEN9X00</td>
<td>1 Year</td>
<td>Feb – Dec, Year 1</td>
<td>30</td>
</tr>
<tr>
<td>4.2. Quantitative Analysis</td>
<td>QTA9X00</td>
<td>1 Year</td>
<td>Jan – Dec, Year 1</td>
<td>30</td>
</tr>
<tr>
<td>4.3. Research Design</td>
<td>DEN9X00</td>
<td>6 Months</td>
<td>Jan – May, Year 2</td>
<td>30</td>
</tr>
<tr>
<td>4.4. Minor Dissertation</td>
<td>MDFN9X1</td>
<td>6 Months</td>
<td>Jan – June, Year 2</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MDFN9X2</td>
<td></td>
<td>June – Dec, Year 2</td>
<td></td>
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</tbody>
</table>

4.1. Financial Economics (FEN9X00)

A key objective of Financial Economics (FEN9X00) module is to provide learners with the required theoretical foundation for understanding the most important developments in financial theory. The predominant focus of the module is on the pricing of risky securities and derivatives from the perspective of a variety of different economic paradigms. Furthermore, the programme includes practically orientated courses focusing on financial crises, and corporate valuation. The list of courses included in this module follows below.

📖 Behavioral finance

Offering: semester 1 and 2


📖 International trade and finance

Offering: semester 2


² The current structure of the programme is undergoing a restructuring to update the contents for greater labour market alignment and internationalisation of the programme. The implementation of the new structure is expected to start in 2018.
Macroeconomics and business fluctuations
Offering: semester 1

Corporate valuation
Offering: semester 2

4.2. Quantitative Analysis (QTA9X00)

As social *scientists*, financial economists strive for maximal rigour in modelling observed phenomena in increasingly complex and integrated financial systems. To facilitate appropriate economic and econometric analysis of financial behaviour, this M.Com programme includes a module dedicated to the development of quantitative methods. Quantitative Analysis (QTA9X00) begins with an advanced introduction to the mathematics and statistics. Competency in mathematics and statistics is an essential skill for anyone wishing to understand either theoretical or applied economic literature. Building on this foundation, learners are taught the theory of time-series econometrics. Following on this, you will be trained to apply a variety of time-series methods to investigate real-world problems in financial markets. This will give you a first-hand perspective of the exciting connection between theory and practice, and provide you with ideas of possible research topics. The list of courses included in this module follows below:

Financial econometrics
Offering: semester 1

Portfolio theory and risk management
Offering: semester 2
Textbooks:

**Required:**

Optional:

Stochastic processes and options pricing theory
Offering: semester 1


Theory of Financial Markets
Offering: semester 1
Textbook: John C Hull (2014); *Options, Futures, and Other Derivatives* (9th Edition)

Equity and fixed income markets
Offering: semester 2

4.3. Research Design (DEN9X00)

The purpose of Research Design (DEN9X00) is to introduce you to how financial economic researchers can (and perhaps should) approach economic problems and issues. The course will not emphasise any particular set of economic problems, but will rather address economic problems in general and how researchers should approach them. These skills will prepare you to conduct the research for your Minor Dissertation (MDFN9X1 & MDFN9X2).

4.4. Minor Dissertation (MDFN9X1 or MDFN9X2)

The ability to conduct independent (although guided) research within a study field is an essential indicator of mastery within that particular field. Working closely with your supervisor, you will be expected to produce a Minor Dissertation (MDFN9X1 or MDFN9X2) on an approved topic in financial economics. To be accepted, your research should be based on a specific and well-articulated hypothesis (or research question), and must include details of an established econometric methodology used to test this hypothesis. It is not required that a masters’ dissertation should include significant novel contributions to the academic literature (although this is certainly
The dissertation needs to be written in a format befitting of a proper academic study. Upon completion, the dissertation will be submitted for evaluation by internal and external examiners. To be eligible for graduation, the learner must also submit a publishable academic article – that is, a concise restatement of the dissertation. Top-achieving learners will be mentored and encouraged to submit their articles for publication with an accredited academic journal (the ultimate achievement for any masters’ student!).

5. Rules, Regulations, and Communication

5.1. Responsibilities of Learners

Mastery of the content covered in the M.Com programme requires a proactive approach: lecture attendance is compulsory; studying the course material, pre- and post-lectures, is essential; class participation is expected; supplementary reading of related academic articles and textbooks is encouraged. It is also beneficial for students to remain up to date with the latest events concerning financial markets, both locally and internationally. Good sources of financial news include The Economist, Financial Mail, Finance Week, F & T Weekly and the Business Day.

It is your responsibility to ask your lecturers for guidance if you are not coping with the demands of the programme! If you encounter any administrative problems, please contact the programme coordinator. We welcome feedback (either positive or negative) from our students, and encourage you to share your suggestions on how we may improve the programme.

5.2. Lecture Times and Venues

In general, lectures take place on Tuesday, Wednesday and Thursday evenings from 18:00 to 21:00. Occasionally, lectures will also be scheduled to take place at the same times on other week nights.

The normal venue for M.Com Financial Economics lectures will be communicated to you in due course. Please refrain from littering and remember to tidy the venue before you leave. Eating / drinking (with the exception of water) in the all lecture venues and computer labs is prohibited.

5.3. Ulink

Important resources for, and information regarding, the M.Com programme (e.g. lecture notes, supplementary readings, and announcements) will be made available on Ulink. For assistance in logging on to the student portal, go to http://student.uj.ac.za, or ask the assistants in the computer laboratory to help you. From the student portal, access Ulink to explore the different tools in your web learning environment.
5.4. Lecture Attendance
Class attendance is compulsory. Students unable to attend a particular lecture should email the programme coordinator to excuse themselves.

5.5. Duration of Study
The duration of the M.Com Financial Economics programme is 18 months. Any student who does not complete all modules, each with a pass mark of at least 50 percent, within two years of initial registration, will receive a first warning. Students who do not complete after two-and-a-half years will be given a final warning. The maximum duration of study is 3 years. Students who are unable to complete their degrees within this period will have their studies discontinued, and will forfeit any credits earned.

5.6. Assessment Policy
To obtain the M.Com Financial Economics degree, learners must pass each module with a minimum mark of 50 percent. A learner passes with distinction if the average of his/her four module marks is 75 percent or better.

You will write individual exams for the various courses constituting a particular module. Please refer to the programme timetable and the individual course learning guides for information regarding exam dates and contents. There are no supplementary assessment opportunities for M.Com students. You will have only one exam opportunity for each course. Please make sure that you are well prepared for each exam!

5.7. Sick Exams
Learners may only apply to write the sick exam for a particular course if they have valid medical or religious reasons. A sick test will only be granted if the learner hands in an application form (available from the programme coordinator) accompanied by a medical certificate or a letter from their religious leader, certifying why the learner has been unable to attend the normal exam. Applications must be made within 7 working days of the normal exam. Similarly, unless stated otherwise in the course-specific learning guide, no late assignments will be accepted without a valid medical certificate and / or explanatory letter along with the necessary supporting documentation. Please note that there is no sick exam for learners who miss the sick exam.
5.8. Calculation of Module Marks

The final mark for FEN9X00 and QTA9X00 are calculated as a weighted average of exam and assignment marks for the various courses that constitute this module. The weights used in this calculation are proportional to the total number of lectures dedicated to the various courses.

- **Financial Economics (FEN9X00)**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Weight in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Trade and Finance</td>
<td>30</td>
</tr>
<tr>
<td>Macroeconomics and Business Fluctuations</td>
<td>25</td>
</tr>
<tr>
<td>Behavioral Finance</td>
<td>25</td>
</tr>
<tr>
<td>Corporate Valuation</td>
<td>20</td>
</tr>
</tbody>
</table>

- **Quantitative Analysis (QTA9X00)**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Weight in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Theory and Risk Management</td>
<td>20</td>
</tr>
<tr>
<td>Financial Econometrics</td>
<td>20</td>
</tr>
<tr>
<td>Stochastic Processes</td>
<td>35</td>
</tr>
<tr>
<td>Theory of Financial Markets</td>
<td>15</td>
</tr>
<tr>
<td>Fixed Income Analysis and corporate valuation</td>
<td>10</td>
</tr>
</tbody>
</table>
Research Design (DEN9X00)

Assessment will be in the form of a series of written assignments, presentations, and a final research proposal. Please refer to the module study guide for further information.

Minor Dissertation (MDFN9X1 or MDFN9X2)

The final module mark for MDFN9X1/2 is calculated as the average of the marks awarded by the internal and external assessors.

6. Selection Prerequisites for Entry to the M.Com Financial Economics Programme

We are only able to accept a limited number of students to the M.Com financial Economics programme every year. Preference will be given to candidates with good academic records. To qualify for entry to the programme, you must hold a relevant Honours qualification (preferably with a specialisation in economics, finance, mathematics or statistics) with a minimum final aggregate of 63 percent. Final selection is conditional on passing of the Entrance Course with a minimum exam mark of 60 percent or otherwise determined by the department of economics and econometrics. Once again, top-performing candidates will be given preference in this selection. Due to capacity constraints, it is possible for a candidate who passes the Entrance Course not to be selected for the programme.