



MASSEY
BUSINESS
SCHOOL

125740
Advanced Investment Analysis

COURSE GUIDE

MASSEY - HCMB
Summer school, 2021

Massey Business School

Te Kura Whai Pakihi

Moemoeā (Vision):

To be a business school of consequence.

Te Pae Tāwhiti (Mission):

To be an educator that supports the wellbeing and ambition of students and staff, contributes to sustainable prosperity in Aotearoa New Zealand, and engenders impactful research of theoretical and practical significance.

Ngā Uara (Values):

- Whai ngākau tētahi ki tētahi—Respect for all
- Hāngai ki te tino ao—Real world relevance
- He ako noa—Learning without boundaries
- Mā te rangahau e arataki—Research-led thinking

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My Phan

A bit about me: I am a fulltime senior risk modelling at Kiwibank – New Zealand and in my final stage of PhD at Massey University. I started my PhD in 2018 with Doctoral Research Scholarship. Before joining the PhD program at Massey, I worked as an Audit Associate in the Financial Services Department of EY (FSO) for about 2 years. This experience prompted my interest in investment, risk management and banking research.

Email: m.phan1@massey.ac.nz
Office location: The Investment Room – Manawatu Campus
Office hours: as posted on Stream

What is this course about?

Summary of the course

This course covers security pricing models, the influence of investors' preferences, performance and investment opportunities in financial markets. An in-depth coverage of investments and portfolio management is provided to develop a way of analysing and thinking about investment that blends theory and practice.

Course learning outcomes

Students who successfully complete this course should be able to:

1. Analyse theory and empirical evidence regarding the determinants of investor preferences and decision making.
2. Critique the asset models of equilibrium in capital markets, their applications and extensions.
3. Construct and analyse portfolio selection models.
4. Evaluate investment portfolios and portfolio management performance.

Relationship to other courses

This course assumes you are very comfortable with all the material in 125700 (or that you have an undergraduate degree in Finance). There is a file **Basic material for 125740** in the Ancillary Files folder for Topic 1. Ensure you are comfortable with all of that. There is also a **Pre-Test** you can take to gauge your facility on that material. If you can not do well on that Pre-Test, you will struggle in this class. NB: the grade on this Pre-Test does not count in your course grade.

Overview of the topics covered (subject to change)

Week 1	Topic 1 - Introduction to Advanced Investment Analysis
Week 2	Topic 2 - Tools – Regression, Excel Solver, Matrix Multiplication
Week 3	Topic 3 – Tools – Advanced Regression and Statistics
Week 4	Topic 4 - Analysing Research
Week 5	Topic 5 - Equity Valuation
Week 6	Topic 6 - Utility and Decision Making
Week 7	Topic 7 - Market Efficiency and Behavioural Finance
Week 8	Topic 8 - Asset Pricing
Week 9	Topic 9 - Portfolio Strategies
Week 10	Topic 10 - Optimisation
Week 11	Topic 11 - Performance Evaluation
Week 12	Review

For details see “Course Topics with chapter assignments” on Stream, in section ‘Course Information’ .

How is this course assessed?

Formal Requirements to pass this course

Students are advised that all grades received as part of the assessment for a course will be subject to moderation by the Chief Examiner (Head of School), and may be adjusted in accordance with the guidelines for the distribution of final grades approved by the College Board.

The assessments at a glance

Assessment	Learning Outcomes	Percentage Weighting	Due Dates
1: Presentation	1, 2	20	various
2: Stock report	1, 2, 3, 4	20	See Stream
3: Portfolio project	3, 4	20	See Stream
4. Test	1, 2, 3, 4	40	TBC

Group Work

As noted below, as part of Assessment 1 you will work with a group (either preparing material to present, or grading another group). There are certainly disadvantages to group work, but there are also advantages; and the reality of life is that often you must work and be assessed within a group.

Typically there have been 5-7 groups in this class, depending on final class size. I believe that the ideal group size is 3-4 students (no more), and we need at least 5 groups to adequately cover the topics. However, if our class is exceptionally small (e.g. 5-6 students), we may have to rethink this.

Note: I will not allow group size deviations which distort the size for other groups. That is, for example, we cannot have a 4-student group, if there are only 10 students in the class. On the first day of class, we should have a very good idea of the exact number of groups.

Assessment 1: Presentation (20%)

Starting about week 5 or 6, there will be presentations based on a journal article (see articles assigned for each topic). Once during the semester, you and your team will present a topic via the journal article and supplementary paper(s).

Your team may choose the topic (and designated paper) to present. For some of the topics there are more than 1 eligible paper. **I recommend you make this choice as soon as possible; no two teams may present the same article.**

You are expected to present the article in such a way that you are teaching the material to the class. You should liberally refer to material from our text, in order to make the article relevant. The best presentations add material and examples to aid in understanding, and the supplementary paper is meant to extend and support that understanding. I will put a great deal of emphasis on how well you teach the class. This is not simply an exercise for you to run through the paper. **Details posted on Stream.**

Assessment 2: Portfolio Project (20%)

Throughout the semester, you will maintain a simulated portfolio. At the end of the semester, you will write a report, analysing your portfolio performance. Your grade does not depend on the portfolio performance, only on your analysis.

As part of this you will “backtest” a portfolio strategy, reporting that performance as well. **Details posted on Stream.**

Assessment 3: Stock Report (20%)

You will analyse a stock from any listed exchange. No two students can analyse the same stock, and there is also a list of ineligible stocks on Stream (stocks recently reported by other students). This report will be from the perspective of a sell-side analyst. You must make a recommendation to buy, sell, or hold, as if to our Student Investment Fund. You must fully justify that recommendation. **Details posted on Stream.**

Assessment 4: Test (40%)

Part 1 (35%) – Test

The final test will have a mixture of practical, quantitative and theoretical questions. While I reserve the right to make changes, the following is my plan as of this writing – **subject to change**:

Part 1 – essay questions from presentations. You will have a choice, but you **must** answer at least one question from a paper you did **not** present or grade.

Part 2 – short answer questions/problems from lecture or text, focusing on practical and technical issues (mostly quantitative).

Part 3 - short answer questions from papers, lectures, BMC, presentations or pilot studies, focusing on theory.

Part 2 (5%) – Participation

Class participation includes your interaction during lectures and during the presentations by other groups. There will be a high expectation of your active engagement during all aspects of the class. More information will be provided in the first lecture.

Missed assignments

If you miss the deadline for an assignment (e.g. stock or portfolio report), there is a late penalty of 10% per **calendar day** (or portion thereof)

Impaired performance

If you experience an extreme event such as bereavement or illness requiring a hospital stay, get in contact and we'll try to work with you.

Student Submission of Assignments

Many of you are aware of the increasing difficulties educational institutions are having dealing with issues of plagiarism. This problem impacts on students as it disadvantages honest students, undermines the credibility of the qualification, and takes up huge staffing resources that could be better spent elsewhere. Massey uses Turnitin[®], a text matching web application, as one of a variety of methods and technologies to detect and deal with the problem. The electronic version of the assignment you submit will be compared with material available on the world wide web including many electronic books, journals, newspapers, cheat sites (or paper mills), web pages and previously submitted assignments.

Each assignment will have a designated submission page on Stream.

Please go to <http://www.massey.ac.nz/?ta5c75148n> for instructions on how to upload your assignments to the Stream course website.

Return of Assessments

We aim to mark assignments submitted on time within 15 working days (3 weeks) from the official due date. Assignments submitted late will obviously be delayed.

Academic Honesty and Plagiarism

For all course assignments it is acceptable (and helpful) to discuss the issues with other students. You may freely ask and answer questions that promote learning.

However, it is NOT acceptable to:

- Copy another student's work, in part or in total, or an official answer from either the current class or from a previous class.
- Allow other students to copy your work, in part or in total.
- Copy *your own work* if it has already been submitted for assessment elsewhere.
- Provide students in future years with copies of your assignments.
- Copy and paste sections from internet sourced documents or pages.
- Have another person prepare and/or write your assignment (or parts of your assignment) on your behalf.

Pay close attention to the 5th item. This is the most common problem I see from students.

Plagiarism is defined by Massey University as:

Presenting as one's own work the work of another, including copying or paraphrasing of another's work without acknowledging it as another person's work through full and accurate referencing. It applies to material presented through written, spoken, electronic, broadcasting, visual, performance or other medium.

Turning in your own work from a previous class is also plagiarism.

Plagiarism can be avoided by correctly acknowledging the authorship of any material in your assignment that is not your own original work. Go to <http://owll.massey.ac.nz/> for guidance on how to avoid plagiarism.

Plagiarism in an assignment may result in your assignment not being awarded any marks. In serious cases, it can result in even more serious disciplinary action by the University.

A link to the Student Guide to Academic Integrity at Massey University is [here](#).

Please make yourself familiar with the Code of Student Conduct available [here](#)

How will we learn in this course?

Approach to Teaching and Learning in the Course

I have designed this course to be highly interactive, based on the principle of an adage you've probably heard:

“tell me and I will forget, show me and I may remember, engage me and I will understand.”

I will give lectures during which I expect interaction with you (questions, comments, discussion). However, because I believe engagement is so important, I will require you to do quite a bit of work, getting prepared to do some teaching yourself (as part of a team) on a specific topic. Further, as part of this engagement concept, you will also prepare another topic, where you will participate in assessing another team. (*Details on this in the assessments section for Assignment 1*)

Workload

This is a 30-credit course - the equivalent of **two undergrad classes**.

That means to get the average grade, the average student should expect to spend an average of around **25 hours per week on this class alone**. This is the weekly average over the entire semester, including exams. It is important to be organised and devote sufficient time from week 1 to avoid having to spend 50 to 60 hours per week catching up.

Required Textbook and materials

COMPULSORY

Investment Analysis and Portfolio Management, 11e

Author: Reilly F., Brown K. & Leeds, S.

Publisher: South-Western/Cengage

You are not required to study all chapters in this book. More information about this is available on Stream.

Introductory Econometrics, 7e

Author: Wooldridge, J.

Publisher: South-Western/Cengage

We are only using a few chapters from this text, so I strongly urge you to get the eBook version, which also has online problems, data and videos.

We also require you to get “**MindTap**.” More details are available on Stream.

ebook discount available for both of the above:

15% discount using discount code NZ15OFF, website www.cengagebrain.co.nz

Portfolio simulation

Details to be determined.

Bloomberg materials

Bloomberg Market Concepts

This is available for free at one of our Bloomberg terminals, **or on your home computer with a special access code**. I will have that access code for you on stream in about week 1.

The BMC has 8 courses, 3 of which will be testable, 1 highly recommended, and 1 specifically for getting to know the terminal for those of you with Bloomberg access.

Terminal Basics

The course has 5 videos, in total about 90 minutes, covering the basics of using the Terminal. Unless you already are quite familiar with using the BBG terminal, I strongly suggest you start with this before continuing with the other courses, however this section will not be specifically tested.

Economic Indicators, Equities, and Currencies

These sections are self-paced modules and video courses, on basic concepts related to investments. These are concepts that you probably should have learned somewhere prior to 125740, but may have missed. We will build on these concepts, but will not specifically lecture based the videos.

There will be questions in the **final test** related to what you will learn in this portion of the BMC.

While these sections use the Bloomberg terminal functions to show examples and get data, the main point is the concepts, not the functions. Having said that, if you want to use this to also learn functions, I recommend you follow along with the video, replicating those functions on the terminal.

Portfolio Management

This course has 5 videos with a total time of about 2 hours. It has concepts that will be helpful in your portfolio project, and will give you another perspective on material I will cover in class, but this course will not specifically be assessed on the test or exam.

Fixed Income, Stock Options, and Commodities

These courses will not be tested or covered in 125.740 but you may be interested to do them on your own.

The total BMC is over 10 hours, but if you are pausing to take notes and follow along on a terminal, it will take at least double that to finish. I did this spaced out over several days.

The code to access the course connected to our class has not yet been assigned. Once I have that, I will post on Stream.

The code should already have the fee waiver enabled; let me know if you are asked to pay.

Bloomberg Case Studies

There are several case studies available from BBG.

Three are especially relevant for our class:

Financial Statements

Financial Statements Analysis

Equity Valuation

These are set up by BBG as gradable assignments, but we will not do that. They are there for you to learn from, extending your study about our lecture or presentation topics, but I will not assess your performance on these assignments in any way. There are other case studies (in addition to the 3 above) enabled on the Bloomberg site which you can read/study, but that material won't specifically be covered in class.

RECOMMENDED

Modern Portfolio Theory and Investment Analysis

Author: Elton, Gruber, Brown, Goetzmann

Publisher: Wiley

At the library, this book is on “2-hour loan”

Active Portfolio Management

Author: Grinold & Kahn

Publisher: McGraw Hill

SUPPLEMENTARY READING

An important part of the educational process in this course is learning how to access research papers. Therefore, you will be required to obtain the readings for this course from SSRN, scholar.google.com, the Massey Library or on author’s websites. Only when a paper is not available will I provide it on Stream. Also note that I do not provide any printed material for this course.

Learning Activities and Teaching Strategies

Role of Lectures

My lectures are intended to guide you on your own, individual learning path. As noted above, real learning comes from you doing it yourself.

Role of Workshops

There will be weekly workshops, designed to enhance or extend the lecture material, usually in the form of a short exercise. For each, you are meant to have worked the problem in advance, and during the workshop I will work through it showing the method. Some weeks this time may be used when a lecture or presentation is particularly lengthy.

Internal Timetable (subject to change)

Day	Time	Room
Lecture: Saturday	13:30 – 16:30pm	Zoom
Workshop: Saturday	TBC	Zoom

Course schedule (Subject to change)

Date	Week	Topic / Lecture	Workshop / Other	assessments
27-Nov	Week 1	1. Introduction to Advanced Investment Analysis	Introduction to Bloomberg and Refinitiv	
4-Dec	Week 2	2. Tools – Regression, Excel Solver, Matrix Multiplication, and Advanced	Tools – Regression	
11-Dec	Week 3	3. Tools – Advanced and Portfolio calculations	Tools - Matrix Multiplication, and Advanced	
18-Dec	Week 4	4. Analysing Research	Replicating Research	
		Christmas & New year break		
8-Jan	Week 5	5. Equity Valuation		stock report due Sunday 9.1.2022
15-Jan	Week 6	6. Utility and Decision Making	Decision Making Problems	
22-Jan	Week 7	7. Market Efficiency and Behavioural Finance	Group presentation	
		Lunar new year break		
12-Feb	Week 8	8. Asset Pricing	Group presentation	
19-Feb	Week 9	9. Portfolio Strategies	Group presentation	
26-Feb	Week 10	10. Optimization	Group presentation	
5-Mar	Week 11	11. Performance Evaluation	Performance Evaluation	port report due Friday 5.3.2022
12-Mar	Week 12	Review, catchup if needed		
19-Mar		Final test		Final test

Presentation Articles

1. Zhou, P, and W. Ruland (2006) "Dividend Payout and Future Earnings Growth", *Financial Analysts Journal*, 62 (3), pp. 58-69.
2. Lie, E. and H. Lie (2002) "Multiples Used to Estimate Corporate Value," *Financial Analysts Journal*, March-April, pp. 44-54.
3. Beaver, W. and D. Morse (1978) "What determines Price-Earnings Ratios?" *Financial Analysts Journal*, July-August, pp. 65-76
4. Chan, Louis K. and Josef Lakonishok (2004) "Value and Growth Investing: Review and Update" *Financial Analysts Journal*, 60 (1), pp. 71-86.
5. Davis, J. (2001) "Mutual Fund Performance and Manager Style," *Financial Analysts Journal*, 57 (1), January-February, pp. 19-27.
6. Statman, M. (2004) "The Diversification Puzzle" *Financial analysts Journal*, Vol 60 Issue 4, p44-53
7. Goodwin, T. (1998) "The Information Ratio," *Financial Analysts Journal*, 54 (4), pp. 34-43.
8. Grinold, R. (1994) "Alpha is volatility times IC times score," *Journal of Portfolio Management*, Summer, pp. 9-16.
9. Arnott, R. and P. Bernstein (2002) "What Risk Premium is 'Normal'?", *Financial Analysts Journal*, March-April, pp. 64-85.
10. Brinson, G., R. Hood, and G. Beebower (1986) "Determinants of Portfolio Performance" *Financial Analysts Journal*, 42 (3), pp. 39-44.

Communicating with each other

Role of Stream

Stream is our learning environment – it's our virtual classroom. It is the main place the resources for this course are stored, and it is also where we talk with each other.

The Stream site will be available two weeks before the teaching semester officially begins. That means you don't have to wait to get going - you can start exploring the environment and even start reading in advance.

News forum: This is a one-way forum from us to you. Look here for important updates about this course. Note that these announcements will automatically be sent to your registered email address. If you see an email with 125740 in the subject line, PLEASE READ IT - it will be important!

Student Discussion: Use this forum to chat with your classmates. I will not monitor this forum.

Communication expectations

We expect everyone in the Massey community to communicate courteously, appropriately, and constructively in all exchanges, as Massey's guidelines stipulate.

General expectations:

- use a meaningful subject line in your discussion postings;
- use the Stream discussion forums appropriately;
- support your colleagues in the course – that means encourage, help, and respect your fellow students.