

# FINANCIAL ECONOMICS ECONOMICS EC3332B-001

Department of Economics  
Western University

C. Alan Bester

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**Office Hours:** TBA

**Class meets:** Mon. 10:30-11:30; Wed. 9:30-11:30

**Classroom:** 66 UCC

**Course website:** <https://owl.uwo.ca/portal>

**Undergraduate inquiries:** 519-661-3507 SSC Room 4075 or [econ-undergrad@uwo.ca](mailto:econ-undergrad@uwo.ca)

## Registration

You are responsible for ensuring you are registered in the correct courses. If you are not registered in a course, the Department will not release any of your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at <https://studentservices.uwo.ca/secure/index.cfm>. If you notice a problem, please contact your Faculty Academic Counsellor immediately.

## Prerequisite Note

The prerequisites for this course are **Economics 2221A/B** and **Economics 2261A/B**.

You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken an antirequisite course. Lack of prerequisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees. This decision cannot be appealed.

If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course in question for graduation.

Recommended course: **Economics 2122A/B**. To understand financial models you absolutely *must* understand statistics. It is not enough to know the formulas. As an example, you should be able to, *in simple English*, give definitions of variance and covariance and explain what the R-squared of a linear regression means. Taking this course without this knowledge is like taking Spanish Literature without ever having spoken or read Spanish before.

## Course Objectives

This course is an overview of asset pricing. We will cover portfolio theory, market efficiency, equilibrium pricing models including the CAPM and APT, models of equity valuation, the term structure of interest rates, and an introduction to derivatives (i.e., pricing and hedging of options and futures).

The goal of the course is to understand the structure and application of asset pricing models. Again, it is not enough to know the formulas. You need to understand the ideas behind these models and how they apply (or fail to apply!) to real data in order to translate stylized models into real world investment decisions. Although practical applications are our ultimate goal, we will need some mathematical derivations and basic proofs to get the understanding we need.

This is an upper-level elective course and is taught in a different style from many intro/intermediate economics courses. The lectures are there to set the stage: Much of the learning will occur outside the classroom as you work problems and think about/apply the ideas we've discussed. This requires a considerable time investment, and you should think carefully about whether your schedule will allow this.

## Texts

**(Required)** Bodie, Kane, Marcus, Perrakis, and Ryan, *Investments*, 7th Canadian Ed.

**(Optional)** Cochrane, *Asset Pricing*

**(Optional)** Ingersoll, *Theory of Financial Decision Making*

I may assign problems out of the main text and/or refer to readings by chapter, so please purchase the current version. The other two texts are optional and recommended for students considering further advanced coursework and/or graduate study. I may also make printed notes available online before class, so please check regularly.

## Software

You are expected to be familiar with a web browser and basic spreadsheet and/or statistics application such as Microsoft Excel, Minitab, STATA, Eviews, or Matlab. For example, you should be able to go to Yahoo Finance, download ten years of monthly historical prices for Google, Inc. stock, import this data into your spreadsheet or statistical package, and make a chart (time series plot). Ideally you should also be able to convert the prices to monthly returns and compute the sample mean and sample standard deviation, but we will cover that on the first day of class. I will use Excel for in class demonstrations. Data for class demonstrations, quizzes, and homework assignments will be posted online in .xls and .txt format.

## Grading

Homework Assignments 15%, Quizzes 15%, Midterm 30%, Final Exam 40%.

Homework is graded as complete (10/10), unsatisfactory (7/10), or missing (0/10). You will receive at least an unsatisfactory for turning in an assignment that attempts all of the problems, so it is always to your benefit to turn in something. The lowest two (2) homework scores are dropped from your grade. Homework may be submitted individually or in groups of up to five students. The name of each student (at least one and no more than five) must appear on the front page to receive credit. *Homework is there to help you.* Its main purpose is to prepare you for the exams!

Quizzes are take home assignments and *must be completed on your own*. You may not discuss quiz problems with anyone except the instructor until after the due date. Quiz problems will generally focus on real data and thus require a computer and software (see above).

The midterm and final are in-class exams. I will announce the midterm date within the first week or two of class; the final exam date is set by the registrar. You are allowed one 8.5 by 11 inch sheet of notes for the midterm, two for the final. You are also allowed a hand calculator. Note sheets may *not* be shared between students during the exam and (this should go without saying) no communication between students is allowed during exams. Smart phones or other devices capable of sending wireless signals may *not* be used as calculators.

**Late assignments are not accepted.** Late homework is treated as missing and may be dropped from the grade (see above). Missing a quiz or midterm will result in the weight of that assignment being transferred to the final exam.

## Outline

We will for the most part follow the *Investments* text. Our textbook is pretty unusual: it is actually fairly clear, readable, and comprehensible to someone who doesn't already know the material. Trust me, after teaching basic stats, this is a huge luxury: take advantage of it!

Introduction (Chapters 1-3): Review this material on your own, either in the first two weeks or ideally before class begins. *You are responsible for this material on exams.* For example, you need to know a firm's differing obligations to its debt and equityholders and the difference between OTC and exchange trading. We will not spend much (if any) time on this in class.

Portfolio Theory (Chapters 4-6): We will begin by discussing historical returns and some basic statistical tools. We'll cover mean-variance (Markowitz) portfolio theory next. We'll go into a bit more technical detail here so some self-review of statistics is recommended.

Asset Pricing Models (Chapters 7-9): Here we introduce the CAPM and APT, two models that describe the tradeoff between risk and return in a cross-section of assets. We will also discuss the Efficient Markets Hypothesis and what it does (and does not) say about the behavior of prices over time.

Empirical Evidence and Evaluation (Chapters 11 and 20): We now apply the CAPM, APT, and EMH to actual data. In particular, how well do these models describe real world returns, and how do they help us in making investment decisions? We'll discuss how things can go wrong, and how to (or whether we even *can*) tell if the problem lies with our model or with our data analysis techniques.

Equity Valuation (Chapters 15 and 16): We'll talk briefly about stock prices and their relationship (or lack thereof) to observable firm-level financial information and overall economic indicators. We will follow the textbook a little less closely here, in particular keeping accounting (shudder) to an absolute minimum. We may digress a bit into present value models and return predictability.

Term Structure of Interest Rates (Chapters 13 and 14): This will be an overview of bond pricing and the term structure of interest rates. We will focus on expectations hypothesis and why bonds (which are often treated as 'riskless') are subject to risk that is actually very economically meaningful. We may jump ahead a bit here and talk about interest rate swaps, and digress a bit into credit risk and its role in the recent financial crisis.

Derivatives: Pricing and Hedging (Chapters 17-19): Finally, we'll talk about pricing of options and futures, including option hedging and trading strategies, binomial trees and the Black Scholes Formula, and theories of valuation for commodity futures, forwards, and swaps.

## Please Note

Remember that the University expects all students to take responsibility for their own academic Programs. Also remember to check your registration to make sure you are enrolled in the correct courses.

1. Guidelines and policies for the Faculty of Social Science and the Department of Economics are posted online in the current Western Academic Calendar at <http://westerncalendar.uwo.ca>.
2. Students must familiarize themselves with the “Rules of Conduct for Examinations” <http://westerncalendar.uwo.ca/2012/pg136.html>.
3. **Cheating as an academic offence:** Students are responsible for understanding what it means to “cheat”. The Department of Economics treats cheating incidents very seriously and will investigate any suspect behavior. Students found guilty will incur penalties that could include a failing grade or being barred from future registration in other economics courses or programs. The University may impose further penalties such as a notation on your official academic transcript, suspension or expulsion.
4. **Plagiarism:** Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge it by using quotation marks where appropriate and referencing with footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the current UWO Academic Calendar at <http://westerncalendar.uwo.ca/2012/pg113.html>).

The University of Western Ontario uses software to check for plagiarism and students may be required to submit their written work in electronic form. Those found guilty will have penalties imposed as noted in point 3.

5. It is Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students are responsible for submitting assignments in class or to the instructor during office hours.
6. When appealing a mark, students should refer to the University's Procedures in the current UWO Academic Calendar (<http://westerncalendar.uwo.ca/2012/pg112.html>). Please note the relevant deadlines.

The Department will not consider any appeal unless an attempt has been made to settle the matter first with your instructor. If after this discussion you remain dissatisfied with a grade or other decision, you may proceed with a written appeal (e-mails are not acceptable) to the Undergraduate Director in Economics, stating the reasons for your appeal. A useful form and checklist is provided at (<http://economics.uwo.ca/undergraduate/Appeal.pdf>).

7. Systematic adjustments of a class grade distribution (either up or down) can occur in Economics courses. The fact that grades have been adjusted is **not** grounds for an appeal.
8. Note the following add and drop deadlines:  
  
Last day to **add** a full course or Second term half course:  
**Tuesday, January 15th 2013**  
  
Last day to **drop** second term half course without academic penalty:  
**Thursday, March 7<sup>th</sup>, 2013**
9. Faculty of Social Science policy states that oversleeping or misreading an exam schedule is not an excuse for a make-up. This rule applies to all mid-term tests and final exams in the Department of Economics.

### **Policy Regarding Makeup Tests and Final Examinations**

*Academic Accommodation will **not** be granted automatically on request. You **must** demonstrate by documentation that there are **compelling** medical or compassionate grounds before academic accommodation will be considered.*

If you decide to write a test or an examination, you must be prepared to accept the mark you earn. Rewriting tests or examinations, or having the value of the test or examination reweighted on a retroactive basis, is **not** permitted. Book airline flights after you know the dates of your final examinations. Airline flights must not conflict with test or final exams.

If you are requesting a makeup test for a midterm or a final examination, unless medically incapable, notify your instructor by email or phone, preferably prior to the scheduled date of the test, but definitely within **24 hours** of the date of the test or exam. Failure to follow this procedure may result in denial of a request for academic accommodation or result in a grade of zero. Set up an appointment as soon as possible to meet personally with your instructor. If the instructor is not available, you may send an email message, copying the Undergraduate Coordinator at [econ-undergrad@uwo.ca](mailto:econ-undergrad@uwo.ca) (Social Science Room 4075). **Notifying your instructor of a missed test or exam does not automatically entitle you to a makeup test.**

Students who seek a makeup test or examination must provide medical or other relevant verification that their absence from a regularly scheduled test or examination is beyond their control. Documentation must support your reasons. Medical documentation should be given to the Academic Counselling Office of your *home* Faculty **as soon as possible (preferably within 24 hours of the test)** if you know you may not be able to write your final examination on the scheduled day and time. Failure to follow this procedure, or to provide supporting documentation, may result in denial of a request for academic accommodation or result in a grade of zero. If your documentation is not acceptable, you will be given a zero for the missed test.

For personal illness, if you consult Student Health Services regarding your illness or personal problem, you should request a Student Medical Certificate from the physician. If

you were seen by an off-campus doctor, obtain a certificate from his/her office at the time of your visit. The off-campus medical certificate form must be used and can be found at: <http://www.uwo.ca/univsec/handbook/appeals/medicalform.pdf>. Notes stating "For Medical Reasons" are not considered sufficient.

For any other circumstances, if you are not sure what documentation to provide, ask your Academic Counselor. If your documentation is judged sufficient, the academic counselor will issue a Recommendation for a Special Examination (a single form for midterms or a triple color form for final examinations). Once you have this form, contact your instructor ASAP to make arrangements. Even if approved from your home faculty Academic Counsellor, there is no guarantee that you will be allowed to write the makeup test and exam.

For final examinations, you need permission from your *home* Faculty Counsellor, your instructor, and the Department Chair. Failure to follow this procedure may result in an examination grade of zero. You must ensure that the Special Examination form has been signed by the instructor and Department Chair and that the form is returned to the Academic Counseling Office for approval without delay. Make-up final examinations, if permitted, will be written within one month of the end of the exam period.

### **Policies Regarding Academic Accommodation**

Information about the Faculty of Social Science's policies regarding academic accommodation is found on its website at <http://counselling.ssc.uwo.ca/procedures/havingproblems.asp> or in Social Science Room 2105. Your "Academic Rights and Responsibilities" are also outlined in the current UWO Calendar at <http://westerncalendar.uwo.ca/2012/pg111.html>. Claiming that "you didn't know what to do" is not an acceptable excuse for not following the stated procedures.

### **Policy Regarding Class Attendance**

If your instructor views your class attendance as unsatisfactory, you can be debarred from writing the final examination. If there is intent to make use of this University policy, you will be notified in writing.

### **Statement on Mental Health**

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit <http://www.uwo.ca/uwocom/mentalhealth/> for more information on these resources and on mental health.