

Economics 138: Financial and Behavioral Economics

Instructor: Raymond J. Hawkins (hawkins@econ.berkeley.edu)

This is an introductory course in behavioral finance. We will cover the theory and analytical models used to include cognitive and social psychology in the investment process. Important themes in the course include risk, return, the limits of arbitrage and social dynamics.

This is a quantitative subject. Calculus, statistics, and microeconomics are prerequisites. We will use calculus, statistics and analytical tools developed during the course. Use of a spreadsheet package like Excel and a statistical package such as R will be important for the homework assignments.

Requirements

The course requirements are (i) ten graded problem sets, (ii) two midterm exams, and (iii) a final exam. Some of the problem sets will involve data work. Your course grade will be determined as follows:

Problem Sets	20%	
Midterms	40%	(20% each)
Final	40%	

The first midterm will be in class on Tuesday, February 20th and the second midterm will be in class on Tuesday, March 20th. The final exam will be from 3 – 6 pm on Thursday, May 10th. The final-exam location will be announced when it is available.

Meeting Times, Discussion Sections and GSIs

The class will meet for lectures on Tuesdays and Thursdays from 12:30 – 2:00 in 100 Lewis Hall. In addition, sections will meet once a week for one hour. The GSIs for this course are

- David Birke (djbirke@berkeley.edu). Section 105: Wed 1 pm – 2 pm, 289 Cory; Section 108: Wed 2 pm – 3 pm, 242 Hearst Gym; Section 106: Wed 3 pm – 4 pm, B51 Hildebrand.
- Djavan De Clercq (djavandeclercq@berkeley.edu). Section 109: Mon 8 am – 9 am, 285 Cory; Section 104: Mon 9 am – 10 am, 285 Cory. Section 107: Mon 1 pm – 2 pm, 242 Hearst Gym.
- Sara Neff (sara_neff@berkeley.edu). Section 101: Mon 2 pm – 3 pm, 79 Dwinelle; Section 102: Mon 4 pm – 5 pm, 2038 Valley Life Sciences. Section 103: Mon 5 pm – 6 pm, 187 Dwinelle.

Sections will review background material, explain computational & analytical techniques, and extend & amplify concepts introduced in the lectures. The GSIs will also hold weekly office hours. *Your first point of contact for questions regarding course material is your GSI.* If the sections or meetings with the GSIs do not resolve your questions, you are welcome to stop by my office (675 Evans) during office hours (Wednesday, 3:00 – 4:30 pm) or at other times by appointment.

To enhance your ability to get questions answered Piazza has been added to bCourses. Questions posted to Piazza are likely to be answered much faster than those submitted via email. You are encouraged to post questions and answers; doing both will further your understanding of the material.

Texts and Other Reading

There is no textbook for the course. Readings will be assigned largely from the **Course Reader** available in both *print and eReader* formats at Copy Central on Bancroft Avenue. Other papers will be assigned as well. Readings will also be assigned from the following two monographs

- *World Development Report 2015: Mind, Society, and Behavior*, World Bank, Washington, DC.
- [*Fundamentals of Futures and Options*, CFA Institute, New York, NY.](#)

The *World Development Report* will be posted on bCourses; [*Fundamentals of Futures and Options*](#) can be downloaded for free. I will assign weekly readings and expect you to read the material as the course proceeds. Other works that you may find interesting include:

- A. Shleifer, *Inefficient Markets* (Oxford University Press, 2000).
- M. Granovetter and R. Swedberg, eds., *The Sociology of Economic Life*, Third Edition (Westview Press, 2011)
- R. H. Thaler, ed., *Advances in Behavioral Finance* (Russell Sage, 1993).
- R. H. Thaler, ed., *Advances in Behavioral Finance: Volume 2* (Russell Sage, 2005).
- R. J. Shiller, *Irrational Exuberance* (Princeton University Press, 2005).
- D. Helbing, *Quantitative Sociodynamics: Stochastic Methods and Models of Social Interaction Processes*, Second Edition (Springer-Verlag, 2010)
- C. Castellano, S. Fortunato and V. Loreto, “Statistical Physics of Social Dynamics,” *Reviews of Modern Physics*, **81**, (2) 591–646 (2009).
- [*Behavioral Finance and Investment Management*](#). The CFA Institute (2010).

Lecture slides will be posted on the bCourses course website.

Course Outline:

- **Overview, scope, and the world before the EMH.** Behavioral finance in historical context. Keynes on investor psychology. Granovetter on social psychology. Osborne on Brownian motion in security prices and the antecedents of algorithmic trading.
- **The Efficient Market Hypothesis.** Its impact on financial economics and subsequent critiques.
- **Noise and Noise Traders.** The concepts of noise and limited arbitrage in the development of explanatory models.
- **Inefficient Markets.** Classic examples of deviations from expected market behavior including dual-listed companies, tech carve-outs, closed-end funds, momentum, and technical trading.
- **Experimental Assets Markets.** Incorporating investor sentiment into price dynamics is shown to explain market experiments, market crashes, and common patterns of technical analysis.
- **Prospect Theory.** How the model “which elegantly capture[s] the experimental evidence on risk taking, including the documented violations of expected utility” describes investor decision making.
- **Behavioral Corporate Finance.** How the social psychology of workers and the managerial psychology of leaders informs the observed actions within and of corporations.
- **Opinion Formation & Dynamics.** The basis of herd behavior and the sociodynamics of group opinion formation.
- **Neuroeconomics and Course Review.** On the basis of our biases. The neuroscience of decision making.

Important Class Policies

1. **Attendance** is taken in Section during the first five days of classes – from Tuesday, January 16th to Monday, January 22nd, inclusive – even if a section meets before the first lecture. *Failure to attend Section without an approved absence during this time will result in your being dropped from the course.* Attendance will generally not be taken in class. You need not contact me or your GSI if you will miss class. There will be no unannounced quizzes. **However, much of the mid-term and final exam material will be based on lectures and discussions in class.**
2. **Personal electronics:**
 - **Laptops** should not be open in class. They are distracting to those around you.
 - **Cell phones** should be silenced or in vibrate mode: preferably off.
 - **Texting** during the lecture should be kept to an absolute minimum.
3. **Email.** *Your first point of contact for questions regarding course material is your GSI.* I am available to answer questions about course policy and course material. Please put “Econ 138” somewhere in the subject line so your email is routed correctly. I will try to respond within 48 hours of receiving your email.
4. **Calculators.** You will need a calculator for Econ 138 exams and your calculator must be “exam legal.” Please refer to the following links to see if your calculator is “exam legal.” If your calculator is listed it is “exam legal.” If your calculator is not listed then it is not “exam legal” and you will need to buy another one; the following links provide suggested alternatives.
 - [The University of New South Wales.](#)
 - [The CFA Institute.](#)
 - [The National Council of Examiners for Engineering and Surveying.](#)

The University of New South Wales has vetted a wide range of calculators and has listed those that can be used for their exams. If you scroll down the page you will find links to calculators grouped by manufacturer. Drill into the link corresponding to the manufacturer of your calculator to see if yours is “exam legal.”

Note: the UNSW link does list some very simple calculators (e.g. four-function calculators) that, while legal, are not powerful enough for an Econ 138 exam. In addition to the basic four functions, your calculator needs to be able to do logs, exponentials, powers and roots (basically everything you need to do much of the homework and the practice exams).

If this is your first time buying a calculator allow me to recommend the Texas Instruments (TI) 30 series solar calculator. The TI 30 series – which I use – is a basic scientific calculator that will server you well in this class and beyond. The solar feature ensures that the batteries will not run out during an exam.

5. **Code of Ethics.** You are expected to know the [Berkeley Campus Code of Conduct](#) and to conduct yourself in this class accordingly. In particular, “all forms of academic misconduct including but not limited to cheating, fabrication, plagiarism, or facilitating academic dishonesty” will not be tolerated. Please review the definitions of cheating posted at [The Center for Student Conduct](#).

Any evidence of cheating will result in a score of zero (0) on that assignment or exam. Cheating on the final exam will result in an “F” for the course. Incidences of cheating will also be reported to Student Judicial Affairs.

6. **Honor Code.** The student community at UC Berkeley has adopted the following Honor Code: “**As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others.**” The Honor Code, as distinct from the Student Code of Conduct, is intended to provide a vehicle for campus-wide awareness and discussion of issues of academic integrity. In the coming months you will notice mention of the Honor Code in a number of contexts, including student orientation and signage in classrooms. You can find more information on the [Honor Code website](#) created by the ASUC, complete with FAQ’s.
7. **Problem sets** are due as indicated on the assignment. Problem sets will be submitted online. You must submit your own work. Copied reports will receive a score of zero (0). Graded projects will be returned in your discussion section.
8. **DSP exam accommodation.** If you are entitled to special accommodation on exams let me know as soon as possible; preferably no later than the end of the second week of the semester.
9. **Missed Exams.** *There are no make-up exams.* If you miss a midterm you must contact me before the exam with an excuse that meets University standards.¹ Failure to sit any midterm without having received approval from the instructor before that exam will result in a zero (0) on that exam. Please take the necessary steps to ensure that you do not have travel plans that conflict with the final as this will not be considered an acceptable excuse for missing the final.

¹Religious holidays not recognized by the University must accompanied by a letter from a religious leader. Schedules for official team events must be provided to me by the end of the second full week of the semester. For unscheduled official team events (e.g. playoffs) please have your coach contact me. A death in the family must be documented. Illness or injury should, if possible, be accompanied by a note from a physician or clinic, on their letterhead.

10. **Exam regrade requests.** Your GSI takes great care in grading exams. If you believe there was an error in adding up the point on your exam, simply point this out to your GSI at the end of section when you receive your exam back. If you believe there to be an error in the *grading* of your exam, here are the steps you **must** follow:
 - (a) Within 7 days of the time that the exams are *first* returned, give your GSI your exam and a *written* (i.e. word processed) request listing the question(s) you think should be regraded and an explanation of why.
 - (b) Your GSI reserves the right to regrade your entire exam, not just the question(s) mentioned in your regrade request. Scores on *any* question can be changed (increased *or* decreased). It is possible for you to end up with fewer points at the end of the regrade than you had originally.
 - (c) I have advised your GSI to reject any regrade request that is for fewer than 3 points per question.
11. **Course Grading.** Your course letter grade will be determined *solely* from the weighted-average percentage of your graded assignments & exams using a curve. Final exams cannot be re-evaluated once grades are submitted to the Registrar's Office. Your scored exams, including the final exam, will be made available to you via Gradescope.
12. **P/NP Option.** Students taking the course under the P/NP option must earn at least a C- to pass the course.
13. **Fire Alarm Policy** An unfortunate phenomenon at UCB is the pulling of fire alarms by students who labor under the illusion that their entire future rests on a single exam grade. This crime is a felony, punishable by a fine and jail time. Anyone caught pulling an alarm in the absence of a fire emergency will fail the course and is subject to expulsion from the University. If there is a fire alarm during an exam, the class will move outside and finish the exam in the allotted time. In this event, follow the instructions of the GSIs.
14. **Recording of Lectures.** You are expected to be familiar with the [UC Berkeley policy regarding Course Note-Taking and Materials](#) and to conduct yourselves accordingly. In particular, “[s]tudents may not make audio or visual recordings of lectures or class presentations without the advance written consent of the instructor.”
 - Students are not authorized to make a video recording of the lectures.
 - Students may only make an audio recording of the lectures with my *advance written consent* per the University Policy noted above.
 - Students are to use any recording for their own study purposes only.

- Students are not authorized to post any lecture recording to the Internet.

Important Campus Policies and Guidelines

1. ACCOMMODATION OF RELIGIOUS CREED

In compliance with Education code, Section 92640(a), it is the official policy of the University of California at Berkeley to permit any student to undergo a test or examination, without penalty, at a time when that activity would not violate the student's religious creed, unless administering the examination at an alternative time would impose an undue hardship that could not reasonably have been avoided. *Requests to accommodate a student's religious creed by scheduling tests or examinations at alternative times should be submitted directly to the faculty member responsible for administering the examination by the second week of the semester.*

Reasonable common sense, judgment and the pursuit of mutual goodwill should result in the positive resolution of scheduling conflicts. The regular campus appeals process applies if a mutually satisfactory arrangement cannot be achieved.

2. CONFLICTS BETWEEN EXTRACURRICULAR ACTIVITIES AND ACADEMIC REQUIREMENTS

The Academic Senate has established Guidelines Concerning Scheduling Conflicts with Academic Requirements to address the issue of conflicts that arise between extracurricular activities and academic requirements. They specifically concern the schedules of student athletes, student musicians, those with out-of-town interviews, and other students with activities (e.g., classes missed as the result of religious holy days) that compete with academic obligations. The guidelines assign responsibilities as follows:

- It is the instructor's responsibility to give students a schedule, available on the syllabus in the first week of instruction, of all class sessions, exams, tests, project deadlines, field trips, and any other required class activities.
- *It is the student's responsibility to notify the instructor(s) in writing by the second week of the semester of any potential conflict(s) and to recommend a solution, with the understanding that an earlier deadline or date of examination may be the most practicable solution.*
- *It is the student's responsibility to inform him/herself about material missed because of an absence, whether or not he/she has been formally excused.*

3. READING, REVIEW, RECITATION (RRR) WEEK

The Reading, Review, Recitation (RRR) period before final exams provides students time to prepare for exams, to work on papers and projects, and to participate in

optional review sessions and meetings with instructors. For the coming semesters, please keep these dates in mind:

- In Spring 2018, formal classes end on Friday, April 27, 2018. RRR Week will take place between the last day of classes (April 27) and the first day of the final exam period (Monday, May 7, 2018).

4. COMMENCEMENT CEREMONIES AND FINAL EXAMS

Campus policy stipulates that graduation ceremonies must take place after the conclusion of final examinations, with the exception of professional school ceremonies with graduate students only.

- Final exams end at 10 pm on Friday, May 11, 2018.
- University Commencement will be held Saturday, May 12, 2018.
- Department Commencement will be held Sunday, May 14, 2018.

Disclaimer

This syllabus is a living document and subject to revision. Whenever the syllabus is revised it will be posted to bCourses and an email will be sent to all class participants informing them of the posting and indicating what has been revised. This version of the syllabus was generated on January 20, 2018.