

Syllabus
INVESTMENTS

BEM 104

Spring Quarter 2023

Tuesday & Thursday 1:00-2:20 p.m. PDT

<https://caltech.zoom.us/my/rroll>

or <https://caltech.zoom.us/j/3295693051>

Text	Instructor
<i>Investments</i> , 11th Edition, by Zvi Bodie, Alex Kane and Alan J. Marcus, (BKM) ¹	Richard Roll rroll@caltech.edu

Purpose and Focus:

This course introduces foundations required for becoming a Chartered Financial Analyst (or CFA), which is the internationally recognized professional certification for security analysts, portfolio managers and financial advisors. There are 154,000 CFA charter holders in 165 countries and about 151 local member societies. A CFA charter holder candidate must pass three successive exams and have at least four years of professional finance experience. The topics in this course and in the assigned text are linked to questions on the CFA exams.

The focus of BEM 104 is on investments in organized and highly competitive financial markets. It does not cover topics such as psychology (behavioral finance), corporate financial decisions, venture capital, risk management and other important financial subjects. Caltech provides more specialized courses on some topics that will be only touched on here, such as options, futures, and international financial markets.

If you know nothing about financial markets and investments, read chapters 1-4 of BKM before the quarter begins.

Recommended Supplemental Texts for every CFA's bookshelf:

1. Fabozzi, Frank J., Sergio M. Focardi, and Petter N. Kolm, 2010. *Quantitative Equity Investing: Techniques and Strategies*
2. Levinson, M., 2010. *Guide to Financial Markets*
3. Grinold, R.C. & R.N. Kahn, 1999. *Active Portfolio Management*

¹ Some scanned copies of assigned chapters can be accessed via the "Course Reserves" tab on canvas.

Schedule:

The instructor will record online presentations and make them available for viewing any time on or after the Tuesday (the first date) listed in the course schedule below.

Schedule

Dates	Topics	BKM Chapters	CFA Problems (BKM pages)
April 4 & 6	Facts about Risk and Return; Portfolio Choice	5 & 6	3-6 (155) 8-9 (183)
April 11 & 13	Portfolio Optimization: General and with Indexes	7 & 8	12 (228) 1-3 (275)
April 18 & 20	Introduction to The CAPM and the APT	9 & 10	8-9,12 (306) 1-8 (330-1)
April 25 & 27	Efficient Markets: Theory and CAPM Evidence	11 & 13	8,10 (370) 1-3 (424)
May 2 & 4	Bonds: Yields, Duration and the Term Structure of Interest Rates	14-16	1-3 (464-5) 9-10 (492-3) 5 (530)
May 9 & 11	Security Analysis	18 & 19	2 (605-6) 5-8 (650-4)
May 16 & 18	Options	20 & 21	1 (693) 5 (743-4)
May 23 & 25	Futures and Swaps	22 & 23	4 (773) 4-5 (806-7)
May 30 & June 1	Portfolio Performance Evaluation; International Investing	24 & 25	14 (849-50) 6 (878)

Explanation of “CFA” and “Detailed” Problems:

Corresponding to the topics each week, there are two types of problems that provide practice in learning about and using the concepts. The first type consists of actual questions from previous CFA exams; these are located at the end of each chapter of the text. The best ones are recommended and are listed in the schedule above. In addition, more detailed quantitative exercises, usually intensive with real data from financial markets, are posted each week on Canvas. For both the CFA problems and the detailed exercises, solutions will be posted (on Canvas) during the subsequent week after the problems are assigned. Exam problems (see schedule below) will be similar to the weekly “detailed” exercises.

Class meetings:

Each week on Tuesday or earlier, students should read the assigned text chapters, go through Canvas-posted PowerPoint presentations on their own and work out exercises for that week (also posted on Canvas.) **No on-campus classes will meet on Tuesdays.**

On Thursdays, the instructor will be present in class on campus and will cover the week's topics, answer questions and work problems as requested by students. In person classes will begin at 1:00 p.m. Thursdays, PDT. They will not be recorded so Thursday attendance is recommended. The instructor will also be available at other times/dates on Zoom by appointment.

In some weeks, Canvas provides supplemental materials that are not required but could be helpful for anyone who wants to become more proficient in a particular sub-area of finance. On request, the instructor will discuss these supplemental materials during the Thursday sessions or by appointment on Zoom.

Grading:

Students can elect a letter grade or pass/fail. Grades or pass/fail will be determined by three take-home exams to be distributed and completed according to the following schedule:

Distributed After class	Due After Class	Fraction of Final Grade
April 20	April 27	25%
May 11	May 18	25%
June 1	June 8 ²	50%

All exams are open book, open notes. Each exam covers cumulative material up through the end of the distribution week. ***Brevity is a virtue and will be rewarded.***

Students are welcome to work cooperatively in groups no larger than four and turn in a single exam for the group. Members of each group will receive the same grade.

NOTICE: During the entire course, there is no requirement to turn in anything except for the exams due on April 27, May 18, and June 8.

² There is no on-campus class June 8; the exam is due at 3 p.m.