BUSB 3502 C
INVESTMENTS
Winter 2016

Professor           Class Time           Room
Howard Nemiroff    Wednesday 2:35pm – 5:25pm   SA 413

Contact Info:

<table>
<thead>
<tr>
<th>Office</th>
<th>710A DT</th>
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<tbody>
<tr>
<td>Office Hours</td>
<td>Tues, 11:00am-12:00pm</td>
</tr>
<tr>
<td>Phone</td>
<td>613.520.2600, x2038</td>
</tr>
<tr>
<td>e-mail</td>
<td><a href="mailto:howard.nemiroff@carleton.ca">howard.nemiroff@carleton.ca</a></td>
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Undergraduate Calendar Description:


Prerequisites
BUSB 2505 with a grade of C+ or higher, STAT 2606 and ECON 2009 with a grade of C- or higher in each.

This course is a prerequisite to
1. BUSI 4500 (with a grade of C- or higher)
2. BUSI 4502 (with a grade of C- or higher)
3. BUSI 4504 (with a grade of C- or higher)
4. BUSI 4510 (with a grade of C- or higher)
5. BUSI 4511 (with a grade of C- or higher)

The School of Business enforces all prerequisites.
Course Description
The objective of this course is to provide students with the tools necessary to become successful investors or portfolio/money managers. A rigorous quantitative and qualitative analysis of the money and capital markets is offered, with the primary focus on the North American markets. There is a detailed examination of how and where securities are traded and how they are valued, providing insight into how investors appropriately allocate funds across different investment vehicles. This course focuses primarily on an examination of the equity markets in North America. A detailed examination of the trading process and the function of securities markets are presented. This is followed by exposure to the concepts of risk and return, specifically analyzing the role played in security valuation and in portfolio diversification.

Required Text:

Suggested Texts/Readings:
Malkiel, B., A Random Walk Down Wall Street, Norton.
Graham, B., The Intelligent Investor
Graham, B., Security Analysis

Problem sets will be placed on CuLearn on a regular basis. It is expected that all students complete the sets in order to be adequately prepared.

Note: There is a required enrolment in Stocktrak for $29.95USD per team (no more than two students per team). Registration info below.

Grading:

- Mid-term Exam 30%  
  (Tuesday, February 24th, in class)
- In-class quizzes 10%  
  (4 in total, dates below)
- Trading Project (see below) 15%
- Final Examination (Date TBD) 45%
- Total 100%

Quiz schedule:

<table>
<thead>
<tr>
<th>Quiz #1</th>
<th>Quiz #2</th>
<th>Quiz #3</th>
<th>Quiz #4</th>
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<tbody>
<tr>
<td>Jan. 20</td>
<td>Feb. 10</td>
<td>Mar. 16</td>
<td>Mar. 30</td>
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All quizzes are worth 2.5% each, commence at the start of class on the date listed, and will be approximately 20-30 minutes in length. There are no make-ups for quizzes.
**Deferred Final Examinations**

Students unable to write a final examination because of illness or other circumstances beyond their control may apply within 5 days of the final examination to the Registrar’s Office (RO) for permission to write a deferred examination. Permission may be granted by the RO when the absence is supported by a medical certificate or other document. However, deferred examinations are not granted to students who make travel plans that conflict with the examination period.

**Missing the Mid-term**

Students unable to write the mid-term because of illness or other circumstances beyond their control may apply directly to the professor to place the mid-term mark allocation onto their Final Exam, making the Final worth 75% of the overall grade. This request must include supporting medical certificates or other documents, and must be submitted no later than the beginning of the next class following the midterm examination (i.e., no later than the start of class on March 2nd). Approval is at the discretion of the professor. There will not be any deferred Mid-term exam.

**Course Outline**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chapter of the Required Text</th>
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<tbody>
<tr>
<td>Investment Environment</td>
<td>1</td>
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<tr>
<td>Financial Markets and Instruments</td>
<td>2</td>
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<tr>
<td>• Money Market</td>
<td></td>
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<tr>
<td>• Fixed Income</td>
<td></td>
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<tr>
<td>• Equities</td>
<td></td>
</tr>
<tr>
<td>• Derivatives</td>
<td></td>
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<tr>
<td>Trading and Securities markets</td>
<td>3</td>
</tr>
<tr>
<td>• Issuing Securities</td>
<td></td>
</tr>
<tr>
<td>• Trading and Market Orders</td>
<td></td>
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<tr>
<td>• Regulations</td>
<td></td>
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<tr>
<td>Return and Risk</td>
<td>4, 5</td>
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<tr>
<td>• Utility Theory, Risk Aversion, and Portfolio Mathematics</td>
<td>4, 5</td>
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<tr>
<td>• Hedging and Insurance</td>
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<tr>
<td>• Probability Theory</td>
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<tr>
<td>Capital Allocation to Risky Assets</td>
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<tr>
<td>Risky Portfolios</td>
<td>6</td>
</tr>
<tr>
<td>• Risky Portfolios and the Risk-Free Asset</td>
<td>6</td>
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<tr>
<td>• Efficient Allocation</td>
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<td>• Excel</td>
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<tr>
<td>CAPM</td>
<td>7</td>
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<tr>
<td>Index Models &amp; APT</td>
<td>8</td>
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<tr>
<td>Market Efficiency</td>
<td>9, 10</td>
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<tr>
<td>• Technical/Fundamental analysis</td>
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<tr>
<td>Behavioural Finance</td>
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</table>
### Bonds
- Prices and Yields
- Term Structure
- Duration/convexity, portfolios

| 12, 13, 14 |

### Derivative Assets (time permitting)
- Futures
- Options
- Valuation

| 17, 18, 19 |

### Portfolio Optimization Techniques/Active Management (time permitting)
- 20

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**Trading Project -- StockTrak**

Suppose you inherited $500,000. In order to keep the money, you must create a portfolio that is appropriate for your age in terms of asset allocation (local and international equities, cash, etc.), is invested according to the required schedule below (temporary cash is ok if opportunities are being explored), and is worth more than $500,000 by the end of the semester. You can trade on the North American exchanges only, you can trade on margin and you can short sell, you can venture into options and futures trading toward the end of the semester if you are properly hedged (although we will not be covering options or futures until possibly the end of the semester – read chapters 18, 19, 20 if interested). As well, please read chapters 10, 15 & 16, and *Security Analysis* to get a better understanding of valuations. Your grade will be based on your total portfolio return and Sharpe ratio calculated at the end of the semester (see grid below). To fully understand the Sharpe Ratio, please read chapter 21.

You can attempt this project alone, or you can team up with one other classmate – no more than **TWO** students per account, no exceptions. To register, please go to [http://www.stocktrak.com/public/members/registrationstudents.aspx?p=BUSI3502Winter2016](http://www.stocktrak.com/public/members/registrationstudents.aspx?p=BUSI3502Winter2016) and follow the instructions. You will need to ensure your (or both) student name(s) is (are) listed fully in the registration, or the missing name will not receive marks at the end of the semester. Make sure that BUSI3502Winter2016 is listed in the class name. I believe there is a discount code attached to the new Bodie/Kane book. The rules and instructions for trading are located on the right hand margin of that page, and on the pull down menus at the top.

**Important notes:**

- Registration opens on January 6th; trading begins on January 15th and ends on April 8th.
- Failure to register by January 19th will result in the deletion of your account and a zero on the assignment.
- Please read the trading restrictions on the website carefully.
- The marking matrix is below – note that, as in real market conditions, your performance is relative to the other participants.
<table>
<thead>
<tr>
<th>Top Sharpe Ratio Third</th>
<th>2nd Sharpe Ratio Third</th>
<th>3rd Sharpe Ratio Third</th>
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<tbody>
<tr>
<td>Top Value Third</td>
<td>15</td>
<td>13.5</td>
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<td></td>
<td>13.5</td>
<td>12</td>
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<td>12</td>
<td>10.5</td>
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**Trading Schedule (by market close each day):**

**By Jan. 19th:** Invest (long only) at least 40% of your portfolio ($200,000) in at least 8 different securities ($3.00 or higher) in at least 3 different sectors as defined by the S&P500. The stocks chosen do not have to be within the S&P500, just use the sector/industry guides. You can certainly invest more than this, and across different countries, but all transactions must be long equity purchases only.

**By Feb. 5th:** While continuing to manage your long investments, increase equity stake to at least 70% of your total available cash. Continue to maintain exposure to at least 8 different securities over at least 3 different sectors. Short at least 2 securities for amounts of at least $10,000 each.

**By Feb. 26th:** keeping at least 70% long (you can manipulate your holdings, but maintain an 70% long exposure - 8 diff securities, 3 sectors min.), you can continue to hold your two (at least) short positions and/or you can now start to cover with options. You do not need to maintain your shorts if you choose. The options strategy(s) you can attempt are as follows;

A minimum of $5k placed into a protective put and/or a covered call.

A protective put is purchasing a put option contract on a stock (or index) that you presently own. It will protect against downside. If the stock (or index) rises, the put is worthless, but you've made money on the stock (or index). This will mitigate much risk.

A covered call is selling (writing) a call on a stock (or index) that you own. It will generate a premium since you sold it, and it can help defer losses should the stock price fall. If the stock price rises, you deliver for a profit. Protective puts and covered calls are far cheaper than shorting, and can give you much added leverage to reduce exposure far more efficiently. Note that if you choose to keep your shorts, you do not need to invest in options – but you must be invested in either or both.

**By Mar. 11th:** Keeping the previous 3 assignments in tune, maintaining at least a 70% long equity stake, you must now enter into options trades independent of your holdings. Choose any strategies you like, buying, writing, spreads, combos, etc., trading no less than $5,000 and no more than $20,000 worth of the underlying asset in each strategy (absolute values if you choose to write). This does not mean $20,000 worth of
options, rather $20,000 worth of the underlying. If you wish to trim down your shorts, protective puts or covered calls, you can as well, as long as you maintain at least $2,500 invested in some form of insurance (independent of the options strategies above).

**By Mar. 25th**: Again, keeping all previous entries in check, maintaining at least a 60% long equity stake, enter into at least 2 futures contract transactions on any commodity only, with a notional value not to exceed $50,000 each (i.e., not the margin amount, the underlying amount).

**By Apr. 8th**: Window-dressing time now. Your trading assignment for this last installment is to package your portfolio however you see fit -- a free-for-all. In the real world, you would typically modify your holdings for your quarterly report so that it reflects what you want people to see, not necessarily what you have done. Since there is no final written submitted portfolio, use this as an opportunity to modify or liquidate so that you can solidify your ranking...

**NOTE**: If, at any time, your portfolio does not satisfy these parameters, you will be penalized 1 mark per offense per trading period. In other words, if you do not trade in 2 futures contracts by Mar. 25th, you will be docked 1 mark. Or, for example, if you do not have 70% of your portfolio invested long in equity in any given trading period, you will also be docked 1 mark, etc. The maximum amount of marks that you can be docked via trading penalties is limited to the grade that you would have received. In other words, it is possible to get 0 on this project, but not less than that. However, if you satisfy all requirements, the minimum you can receive on this project is a 9 out of 15.

**CuLearn**: All course information, handouts, grades, announcements will be placed on CuLearn. It is your responsibility to ensure that you have access. In order to log on to the course page, you need to firstly be formally registered in 3502. Please check it regularly.
Course Sharing Websites
Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Required calculator in BUSI course examinations
If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group work
The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

- A+ = 90-100
- A  = 85-89
- A - = 80-84
- B+ = 77-79
- B  = 73-76
- B - = 70-72
- C+ = 67-69
- C  = 63-66
- C - = 60-62
- D+ = 57-59
- D  = 53-56
- D - = 50-52
- F  = Below 50
- WDN = Withdrawn from the course
- ABS = Student absent from final exam
- DEF = Deferred (See above)
- FND = (Failed, no Deferred) = Student could not pass the course even with 100% on final exam

Academic Regulations, Accommodations, Etc.
University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university’s website, here: http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/

Requests for Academic Accommodations
For Students with Disabilities:
The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a
disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. The deadlines for contacting the Paul Menton Centre regarding accommodation for final exams for the April 2016 exam period is March 6, 2016.

For Religious Obligations:
Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student. Students or instructors who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

For Pregnancy:
Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

Academic Integrity
Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another’s ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated. Penalties may include; a grade of Failure in the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: http://www2.carleton.ca/sasc/advisingcentre/academic-integrity/.

Sprott Student Services
The Sprott student services office, located in 710 Dunton Tower, offers academic advising, study skills advising, and overall academic success support. If you’re having a difficult time with this course or others, or just need some guidance on how to
successfully complete your Sprott degree, please drop in any weekday between 8:30am and 4:30pm. Our advisors are happy to discuss grades, course selection, tutoring, concentrations, and will ensure that you get connected with the resources you need to succeed! [http://sprott.carleton.ca/students/undergraduate/support-services/](http://sprott.carleton.ca/students/undergraduate/support-services/)

Be in the know with what’s happening at Sprott: Follow @SprottStudents and find us on Facebook SprottStudents Sprott.

**Important Information:**
- Students must always retain a hard copy of all work that is submitted.
- All final grades are subject to the Dean’s approval.
- For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, it would be easier to respond to your inquiries if you would send all email from your Carleton account. If you do not have or have yet to activate this account, you may wish to do so by visiting [http://carleton.ca/ccs/students/](http://carleton.ca/ccs/students/)

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**Important Dates and Deadlines – Winter 2016**

**Graduate, Undergraduate and Special Students**

- **Winter term: January 6, 2016 – April 8, 2016**

**December 25 to January 3**

University closed

**January 4**

University reopens

**January 6**

Winter-term classes begin.

**January 19**

Last day for registration for winter term courses.
Last day to change courses or sections (including auditing) for winter term courses.
Students who have not deposited (via automated upload) the final copy of their thesis to the office of the Faculty of Graduate and Postdoctoral Affairs must register.

**January 31**

Last day for a [fee adjustment](#) when withdrawing from Winter term courses or the Winter portion of two-term courses. Withdrawals after this date will create no financial change to Winter term fees (financial withdrawal).

**February 12**

April examination schedule available online.
**February 12-20**
Fall-term deferred examinations will be held.

**February 15**
Statutory holiday, University closed.

**February 15-19**
Winter Break. Classes are suspended.

**March 1**
Last day for UHIP refund applications for International Students who will be graduating this academic year.
Last day for receipt of applications from potential spring (June) graduates.

**March 6**
Last day to submit Formal Examination Accommodation Forms to the Paul Menton Centre for Students with Disabilities for April examinations.

**March 24**
Last day to pay any remaining balance on your Student Account to avoid a hold on access to marks through Carleton Central and the release of transcripts and other official documents. An account balance may delay Summer 2016 course selection.

Last day for tests or examinations in courses below the 4000-level before the final examination period (see Examination Regulations in the Academic Regulations of the University section of this Calendar).

**March 25**
Statutory holiday, University closed.

**April 1, 2016**
Last day for receipt of applications for admission to an undergraduate program for the fall/winter session, from candidates whose documents originate outside Canada or the United States, except for applications due February 1 or March 1.

**April 8**
Winter term ends.

Last day of fall/winter and winter-term classes.
Last day for academic withdrawal from fall/winter and winter term courses.
Last day for handing in term work and the last day that can be specified by a course instructor as a due date for term work for fall/winter and winter-term courses.

**April 9-10**
No classes or examinations take place
**April 11-23**
Final examinations in winter term and fall/winter courses may be held. Examinations are normally held all 7 days of the week.

**April 15, 2016**
Winter Co-op Work Term Reports are due.

**April 23, 2016**
All take home examinations are due on this day.

**June 6-16**
Fall/winter and winter term deferred final examinations will be held.