

Enterprise Risk Management Program

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**ERMC PS5001: Introduction to Finance**  
**Mondays, 6:10PM – 8:00PM**  
**3 credits**

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| <b>Instructor:</b>          | Christakis (Chris) Droussiotis, <a href="mailto:c.droussiotis@columbia.edu">c.droussiotis@columbia.edu</a> , (908) 930-4725 (Voice /Text)   |
| <b>Instructor's Web:</b>    | <a href="http://www.ProfessorDrou.com">www.ProfessorDrou.com</a>  |
| <b>Office Hours:</b>        | 5:00pm-6:00pm (Thursdays) Remote via Zoom by Appointment  |
| <b>Response Policy:</b>     | I intend to log onto the course and check email daily. You should expect a response from me within 24 hours. If you have an urgent question or concern, please contact me via text message or telephone |
| <b>Teaching Assistants:</b> | Stuart Shelly <a href="mailto:stuart.shelly@columbia.edu">stuart.shelly@columbia.edu</a>  |
| <b>Office Hours:</b>        | By Appointment  |

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### Course Overview

This course is designed to provide practitioners and those seeking careers in finance with a rigorous combination of theory and practice as we explore the fundamental principles of finance. Students currently employed in this dynamic and evolving field will have the opportunity to become familiar with many of the core principles and concepts commonly applied in their field daily. From a practical perspective, Introduction to Finance is meant to reinforce work-related practices, such as analyzing financial statements, the application of time value of money concepts, asset valuation on a discounted cash flow (DCF) basis, cost benefit analysis (CBA), and the quantification of the multifaceted relationship between risk and return in financial markets. The course will be divided into two sections: The first part of the course will focus investment analysis concepts and the second part of the course will focus on corporate finance concepts including understanding financial statements, build projections and corporate valuations.

Through this course, students wishing to enter diverse areas of finance, such as asset management, credit analysis, financial and investment analysis, portfolio management, and risk management, will have the opportunity to acquire and develop critical work-related skills. These include evaluating corporate performance based on a thorough analysis of financial statements, estimating the present and future values of a wide range of cash flows, and using these concepts as the basis for asset valuation, applying commonly used cost-benefit analysis methods to evaluate investment decisions, and estimating the risk and return of individual securities and diversified portfolios.

The topics covered in this course provide students with the necessary background and preparation to take more advanced courses in finance.

### Learning Objectives (LO)

Upon successful completion of this course, you will be able to:

1. Apply the principal time value of money (TVM) concepts used in financial analysis and valuation.
2. Understand Risk & Return tradeoff and the mitigation of such risk through allocation and diversification
3. Compare the risk and returns to market and learn other measurements of calculating expected return
4. Understand how stocks and bonds trade in the secondary markets and how they are valued. Apply basic risk & return analysis based on expected cash flows (dividends or coupon payments)
5. Classify the core components of the three (3) principal financial statements: the balance sheet, the income statement, and the statement of cash flows.
6. Describe the applications and uses of common-size financial statement analysis.
7. Identify commonly used financial ratios to measure a firm's financial performance.
8. Determine the value of debt and equity securities using discounted cash flow methods (DCF) and alternative valuation techniques and use these for various transactional situations such as Mergers and Acquisition or Leveraged Buyout Outs

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### Readings

#### *Textbook (CD)*

The following text is based on the professor's lecture notes and is highly recommended – with the textbook you can access Active Learning homework platform.

Droussiotis, C. (2020), *An Analytical Approach to Investments, Finance and Credit*, Preliminary Edition. Cognella Publishing. ISBN: 978-1-1935551-66-9 - Link to purchase including Active Learning: <https://store.cognella.com/95829>

#### *Textbook (RWJ)*

Ross, Westerfield, and Jordan. (2012) *Fundamentals of Corporate Finance*, 12<sup>th</sup> Edition. McGraw-Hill Irwin. ISBN 978-1-259-91895-7

#### *Supplemental Readings*

I will post supplementary articles, business cases, and Power Point Lecture Notes on Canvas and on my website [www.ProfessorDrou.com](http://www.ProfessorDrou.com) on a regular basis.

#### *Financial Calculators*

Given the scope and nature of Introduction to Finance, students are strongly recommended to obtain a financial calculator, such as: HP-10BII or Texas Instruments (TI) BAIL.

Chapters 4 and 6 in your RWJ textbook include an appendix that shows how to use both financial calculators to perform present value and future value calculations and to solve for the rate of return.

#### *Excel*

In addition, students are encouraged to use Excel to perform the analytical calculations discussed in the course. Most of the lectures will include spreadsheet analysis.

### Resources

#### *Columbia University Library*

Columbia's extensive library system ranks in the top five academic libraries in the nation, with many of its services and resources available online: <http://library.columbia.edu/>.

#### *SPS Academic Resources*

The Office of Student Affairs provides students with academic counseling and support services such as online tutoring and career coaching: <http://sps.columbia.edu/student-life-and-alumni-relations/academic-resources>

#### *Columbia University Information Technology*

[Columbia University Information Technology](http://columbia.uit.edu/) (CUIT) provides Columbia University students, faculty, and staff with central computing and communications services. Students, faculty, and staff may access University-provided discounted software downloads (<https://columbia.uit.edu/>).

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**Course Requirements (Assignments)**

**Graded Homework Problems (20%):**

Graded Homework Problems give you an opportunity to demonstrate your mastery of the topics covered in the course and solidify your knowledge of finance theory through the practical application of the concepts, models, and theories, discussed in class. Students are required to submit a set of Graded Homework Problems. Homework and due dates will be posted on Canvas. The student could wish to submit their homework via Cognella’s ACTIVE LEARNING platform.

**Individual Project (15%):**

Each student will be assigned a publicly traded company. See Exhibit A for Project’s description.

**Attendance (5%):**

Attendance (both in class and on-line) will be recorded.

**Midterm Exams (I & II) (30%):**

There will be two short Midterm Exams that will be based on the textbook and the spreadsheets. Midterm Exam I will be based chapters 1-4 (Time Value of Money, Risk, Return and Modern Portfolio Theory concepts) and Midterm Exam II will be based chapters 10 and 11 (Secondary market – stock and bonds)

**Final Exam (30%):**

The Final Exam will include some of the concepts from the midterm including equity valuation, Return and TVM. Most of the exam though will focus on textbook chapters 15-17 and partial chapter 9. The students need to study spreadsheets analysis covered in class including the Alexandria Hotel projections and DCF analysis, Hyatt stock valuation, LBO and Capital Markets financial model, and return and bond analytics spreadsheet. The exam will be taken during the Exam Period. It will be opened books taken on-line.

The students need to study the various spreadsheet analysis covered in class including the Celerity Technology Company case study; the Alexandria Hotel WACC analysis and Hyatt Corporation enterprise valuation methods.

**Evaluation/Grading**

The final grade will be calculated as described below:

**FINAL GRADING SCALE**

| Grade | Percentage      | ASSIGNMENT                   | % Weight |
|-------|-----------------|------------------------------|----------|
| A+    | 98–100 %        | Mid-term Exam                | 30%      |
| A     | 93–97.9 %       | Final Exam                   | 30%      |
| A-    | 90–92.9 %       | Attendance and Participation | 5%       |
| B+    | 87–89.9 %       | Graded Homework              | 20%      |
| B     | 83–86.9 %       | Individual Project           | 15%      |
| B-    | 80–82.9 %       |                              |          |
| C+    | 77–79.9 %       |                              |          |
| C     | 73–76.9 %       |                              |          |
| C-    | 70–72.9 %       |                              |          |
| D     | 60–69.9 %       |                              |          |
| F     | 59.9% and below |                              |          |

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### Course Policies

I expect you to come to class on time and thoroughly prepared. I look forward to an interesting, lively and confidential discussion. If you miss an experience in class, you miss an important learning moment, and the class misses your contribution.

#### *Late work*

There will be no credit granted to any written assignment that is not submitted on the due date noted in the course syllabus without advance notice and permission from the instructor.

### School Policies

#### *Copyright Policy*

Please note—Due to copyright restrictions, online access to this material is limited to instructors and students currently registered for this course. Please be advised that by clicking the link to the electronic materials in this course, you have read and accept the following:

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials. Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

#### *Academic Integrity*

Columbia University always expects its students to act with honesty and propriety and to respect the rights of others. It is fundamental University policy that academic dishonesty in any guise or personal conduct of any sort that disrupts the life of the University or denigrates or endangers members of the University community is unacceptable and will be dealt with severely. It is essential to the academic integrity and vitality of this community that individuals do their own work and properly acknowledge the circumstances, ideas, sources, and assistance upon which that work is based. Academic honesty in class assignments and exams is always expected of all students.

SPS holds each member of its community responsible for understanding and abiding by the SPS Academic Integrity and Community Standards posted at <http://sps.columbia.edu/student-life-and-alumni-relations/academic-integrity-and-community-standards>. You are required to read these standards within the first few days of class. Ignorance of the School's policy concerning academic dishonesty shall not be a defense in any disciplinary proceedings.

#### *Accessibility*

Columbia is committed to providing equal access to qualified students with documented disabilities. A student's disability status and reasonable accommodations are individually determined based upon disability documentation and related information gathered through the intake process. For more information regarding this service, please visit the University's Health Services website: <https://health.columbia.edu/services/ods/support>.

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**Course Schedule/Course Calendar**

Please check Canvas and website [www.ProfessorDrou.com](http://www.ProfessorDrou.com) for schedule changes and updates:

**LECTURE OUTLINE**

| Week | Date  | S                   | LO     | Textbook Chapters/Notes   | Lecture  | Assignments /Homework                    |
|------|-------|---------------------|--------|---|--|--|
| 1.   | 9/12  | INVESTMENT ANALYSIS |        | Power Point Presentation  | Going over Course Syllabus.<br>Complete “Getting to Know You” forum.<br><br><b><u>LECTURE 1</u></b><br>Introductory Finance Concepts: <ul style="list-style-type: none"> <li>• Risk, Return, Time &amp; Allocation</li> <li>• Trading Securities (Stocks/Bonds)</li> <li>• Firm Specific (Financial Analysis and Valuation)</li> <li>• Transaction Analysis</li> </ul> |  |
|      |       |                     | L1     | Ch. 1   | <b><u>LECTURE 2 – Time Value of Money</u></b><br>TVM Concepts: <ul style="list-style-type: none"> <li>• One-time FV, PV, Interest, Time</li> <li>• Annuity FV, PV, Interest, Time</li> <li>• Uneven CF</li> </ul>  |  |
| 2.   | 9/19  |                     | L2     | Ch. 2&3   | <b><u>LECTURE 3 – Risk, Return, Time, Alloc</u></b><br>Risk & Return Concepts: <ul style="list-style-type: none"> <li>• HPR, IRR and Stand. Dev.</li> <li>• Historical &amp; Scenario</li> <li>• Cov, Cor &amp; Efficient Frontier</li> </ul>  | <b><u>Hwk#1 Due:</u></b><br>Ch 1a and 1b |
| 3.   | 9/26  |                     | L3     | Ch. 3&4 (partial)   | <b><u>LECTURE 4 – Comparative Analysis</u></b><br>Comparative Market Analysis Concepts: <ul style="list-style-type: none"> <li>• Beta, CAPM, Sharpe Ratio</li> </ul>   | <b><u>Hwk#2 Due:</u></b><br>Ch 2         |
| 4    | 10/3  |                     | L4     | Ch. 10  | <b><u>LECTURE 5 – Investing in Stocks</u></b><br>Secondary Market/Trading Stocks: <ul style="list-style-type: none"> <li>• Stock Exchanges</li> <li>• Return &amp; CF concepts (Div)</li> <li>•</li> </ul>   | <b><u>Hwk#3 Due:</u></b><br>Ch 3&4       |
| 5    | 10/10 |                     |        |   | MIDTERM EXAM I – REVIEW  | <b><u>Hwk#4 Due:</u></b><br>Ch 10        |
| 6    | 10/17 |                     |        |   | MIDTERM EXAM I (Chapters 1-4)  |  |
| 7    | 10/24 | L4                  | Ch. 11 | <b><u>LECTURE 6 – Investing in Bonds</u></b><br>Secondary Market/Trading Bonds: <ul style="list-style-type: none"> <li>• Bond Markets</li> <li>• Bond Analysis (CY, YTM, YTC)</li> <li>• Basic Bond Val (Duration &amp; Convexity)</li> </ul> |  |  |

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| Week | Date  | S                        | LO    | Textbook Chapters/Notes        | Lecture   | Assignments /Homework                       |                             |
|------|-------|--------------------------|-------|--------------------------------|---|---|-----------------------------|
|      |       |                          |       |                                | MIDTERM EXAM II – REVIEW  |   |                             |
| 7    | 10/31 |                          |       |                                | MIDTERM EXAM II (Chapters 10-11)  | <b>Hwk#5 Due:</b><br>Ch 11                  |                             |
|      | 11/7  | <b>NO CLASS</b>          |       |                                |   |   |                             |
| 9    | 11/14 | <b>CORPORATE FINANCE</b> | L5, 6 | RWJ: Ch. 2<br>CD: Ch. 15       | <b>LECTURE 7 – Financial Analysis</b><br>Financial Statement Analysis: <ul style="list-style-type: none"> <li>• Balance Sheet, Income Statement</li> <li>• Building Cash Flow Statement</li> </ul> <b>Case study: Celerity Technology Company</b>   |   |                             |
| 10.  | 11/21 |                          | L7    | RWJ: Ch. 3,4<br>CD: Ch. 15, 16 | <b>LECTURE 7 (Cont.)– Financial Analysis</b><br>Financial Statement Analysis: <ul style="list-style-type: none"> <li>• Ratio Analysis</li> <li>• Projections</li> </ul> <b>Case study: Celerity Technology Company</b>  |   |                             |
| 11   | 11/28 |                          | L8    | CD: Ch 17                      | <b>LECTURE 8 – Valuation Analysis</b><br>Introducing 6 methods of Valuation: <ul style="list-style-type: none"> <li>• Method#1: Stock Price</li> <li>• Method #2: Intrinsic Value</li> <li>• Method #3: DDM</li> <li>• Method #4: Trading Comparable</li> <li>• Method #5: Acquis. Comparable</li> <li>• Method #6: DCF</li> </ul> <b>Case Study: Hyatt Corporation</b> |   |                             |
| 13.  | 12/5  |                          | L8    | CD: Ch 9                       | <b>LECTURE 9 (Transaction Analysis)</b> <ul style="list-style-type: none"> <li>• Method #6 (Cont.): DCF Method</li> <li>• Case Study -LBO and M&amp;A</li> </ul> <b>Case Study: Alexandria Hotel</b>  |   |                             |
| 14.  | 12/11 |                          |       |                                | CD: 15-17, 9 (partial)  | <b>Project Review and Final Exam Review</b> | <b>Project Due</b><br>12/22 |
| 15.  | 12/19 |                          |       |                                | <b>FINAL EXAM</b>   |   |                             |

## EXHIBIT A - FINAL PROJECT

Please submit the entire project including the write-up and excel analysis in a PDF format.

### 1. Company Profile

- Write a brief profile of the company you are assigned to including a description of their products or services and the markets they compete.
- Summary of their stock performance in the last quarter versus the market and closest competitors.

### 2. Financial Analysis

- The financial analysis should include, but not be limited to, the preparation of the latest 3-year financial statements (Income Statement, Balance Sheet and Cash Flow Statement) including the Last Twelve Months (LTM) – please note that LTM means that if you are using June 30, 2022 financials then use the income and cash flow statements for June 30 and Mar 31 2022, December 31 and September 30 2021. For the balance sheet use June 30, 2022.
- Provide an explanation of the results year-over-year including ratio and trend analysis

### 3. Projections & Valuations

- Projections and Valuation Analysis for your assigned public company using Excel. The valuation analysis should calculate the assigned companies Enterprise Value using the following 3 methods of valuation:
  - Method #1 (current stock price to calculate the EV)
  - Method #4 (based current trading peer comparable)
  - Method #6 (DCF Analysis)
- In addition to the analysis, you need to provide a page or two of discussions on your analysis including the assumptions you used for driving revenues and expenses.
- Discussions on the results on your various methods of valuation and recommend if someone should **buy, hold, or sell the stock.**

### 4. Technical Analysis

- Analyze the stock performance against the market (S&P 500) generating beta coefficient and other standard deviation results using Excel's regression analysis or calculated manually.

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**ASSIGNED COMPANIES**

| #  | COMPANY                       | SYMBOL | SECTOR             | INDUSTRY                       |
|----|-------------------------------|--------|--------------------|--------------------------------|
| 1  | Albany International          | AIN    | Consumer Cyclical  | Textile Manufacturer           |
| 2  | American Axle & Manufacturing | AXL    | Consumer Cyclical  | Auto Parts Manufacturer        |
| 3  | AZEK Corporation              | AZEK   | Industrials        | Building Products              |
| 4  | Boyd Gaming Corp.             | BYD    | Consumer Cyclical  | Resorts & Casinos              |
| 5  | Carnival Corporation          | CCL    | Consumer Cyclical  | Cruise Operator                |
| 6  | Celanese Corporation          | CE     | Basic Material     | Chemicals                      |
| 7  | Century Casino                | CNTY   | Consumer Cyclical  | Resorts & Casinos              |
| 8  | Choice Hotels International   | CHH    | Consumer Cyclical  | Lodging                        |
| 9  | Constellation Brands          | STZ    | Consumer Defensive | Wineries & Distilleries        |
| 10 | Crimson Wine Group            | CWGL   | Consumer Defensive | Wineries & Distilleries        |
| 11 | Darden Restaurants            | DRI    | Consumer Cyclical  | Restaurants                    |
| 12 | Delta Airlines                | DAL    | Industrials        | Airlines                       |
| 13 | Doximity                      | DOCS   | Technology         | Digital Technology             |
| 14 | Flowserve Corporation         | FLS    | Industrials        | Specialty Industrial Machinery |
| 15 | HCA Healthcare, Inc.          | HCA    | Healthcare         | Medical Care Facilities        |
| 16 | Hormel Foods Corporation      | HRL    | Consumer Defensive | Packaged Foods                 |
| 17 | International Paper           | IP     | Consumer Cyclical  | Paper & Packaging              |
| 18 | Kellogg Company               | K      | Consumer Defensive | Food                           |
| 19 | Laureate Education            | LAUR   | Consumer Defensive | Education & Training Services  |
| 20 | Marcus Corporation            | MCS    | Consumer Cyclical  | Lodging                        |
| 21 | Marriott International        | MAR    | Consumer Cyclical  | Lodging                        |
| 22 | McDolands Corporation         | MCD    | Consumer Cyclical  | Restaurants                    |



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|    |                             |      |                    |                               |
|----|-----------------------------|------|--------------------|-------------------------------|
| 23 | Nabors Industries           | NBR  | Energy             | Oil & Gas Drilling            |
| 24 | Royal Caribbean Cruises Ltd | RCL  | Consumer Cyclical  | Cruise Operator               |
| 25 | Select Medical              | SEM  | Healthcare         | Medical Care Facilities       |
| 26 | Silgan Holdings             | SLGN | Consumer Cyclical  | Paper & Packaging             |
| 27 | Starbucks Corporation       | SBUX | Consumer Cyclical  | Coffee shops                  |
| 28 | Steel Dynamics              | STLD | Basic Material     | Chemicals                     |
| 29 | TAL Education Group         | TAL  | Consumer Defensive | Education & Training Services |
| 30 | Texas Instrument            | TXN  | Technology         | Semiconductors                |
| 31 | Texas Roadhouse             | TXRH | Consumer Cyclical  | Restaurant                    |
| 32 | Tyson Foods                 | TSN  | Consumer Defensive | Packaged Foods                |
| 33 | U.S. Foods                  | USFD | Consumer Defensive | Food Distributor              |
| 34 | United Airlines             | UAL  | Industrials        | Airlines                      |
| 35 | Verso Corporation           | VRS  | Basic Material     | Paper & Packaging             |
| 36 | Wendy's Company             | WEN  | Consumer Cyclical  | Restaurant                    |
| 37 | Wesco International         | WCC  | Industrials        | Industrial Distribution       |
| 38 | Wyndham Hotels & Resorts    | WH   | Consumer Cyclical  | Lodging                       |
| 39 | Wynn Resorts                | WYNN | Consumer Cyclical  | Resorts & Casinos             |
| 40 | Yum! Brands                 | YUM  | Consumer Cyclical  | Restaurants                   |