

# PACE UNIVERSITY

## Cycle 13 Module 6 MBA 711: Business Analysis

**Module Co-directors:** Dr. Iuliana Ismailescu and Dr. Fred Silverman

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### Course Objectives

The focus of MBA 711 is on quantitative approaches to analyzing business data and making better business decisions. The module has three components:

- Data analysis
- Decision modeling
- Valuation of the firm

**Data analysis** covers the application of statistical tools useful for making effective managerial decisions in an uncertain environment. Students will develop valuable data analysis skills and the ability to choose appropriate statistical methods and interpret them in realistic management situations. These tools include methods for collecting, organizing, presenting and analyzing data utilizing Excel and StatTools, a commercial Excel add-in.

**Decision modeling** covers the use of business models as an aid to management decision making. Students will gain an understanding of the model building process and see how models can be successfully applied in a wide range of applications. Students will learn how to use Excel to formulate, solve and interpret linear programming models in many areas of business.

**Valuation of the firm** deals with the valuation of the levered firm, with a focus on equity valuation. It covers critical methods and tools used to estimate the fundamental value of an enterprise.

**Financial Statements:** Use the accounting equation to analyze business transactions, and explain the relationships among financial statements. Conduct financial statement analysis.

By the conclusion of the module, students will be able to:

- Appreciate how statistical analysis contributes to effective management decision making
- Extract information from large collections of data by organizing, presenting, describing and interpreting the data in a problem context
- Use Excel and StatTools to quickly and effectively perform data analysis and interpret results for:
  - Descriptive statistical measures
  - Confidence intervals and hypothesis tests
  - Regression analysis

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- Appreciate how decision modeling contributes to effective management decision making
- Build Excel models of business decision problems in a spreadsheet
- Recognize and solve important problems in all functional areas of business
- Estimate firm value through various models such as discounted cash flow and relative valuation
- Use techniques of forecasting future cash flows, growth rates and discount rates based on fundamental analysis, macro-economic analysis, and industry characteristics.
- Interpret a classified balance sheet and items in an income statement.
- Understand the impact of a business transaction on financial reporting.
- Perform financial statement analysis.

### **Required Reading**

**Text 1:** Data Analysis and Decision Making, 4<sup>th</sup> ed., Albright, Winston, Zappe, South Western Cengage Learning

2. Describing the Distribution of a Single Variable
3. Finding Relationships among Variables
4. Probability and Probability Distributions
5. Normal, Binomial, Poisson and Exponential Distributions
7. Sampling and Sampling Distributions
8. Confidence Interval Estimation
9. Hypothesis Testing
10. Regression Analysis: Estimating Relationships
11. Regression Analysis Statistical Inference
13. Introduction to Optimization Modeling
14. Optimization Models

Optional Reading:

17. Online Chapter: Importing Data into Excel
12. Time Series Analysis and Forecasting

**Text 2:** AD: Investment Valuation, 3<sup>rd</sup> ed., Aswath Damodaran, John Wiley & Sons

1. Introduction and Overview – Chapters 1 & 2
2. Financial Statements & Financial Statement Analysis Revisited – Chapter 3
3. The Risk-free Rate and Risk Premiums – Chapter 7
4. The Cost of Capital Revisited – Chapter 8
5. Estimating Growth – Chapter 11
6. Dividend Discount Models – Chapter 13
7. Free Cash Flow to Equity Valuation Models – Chapter 14
8. Free Cash Flow to the Firm – Chapter 15

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9. Relative Valuation, PE, EV/EBITDA, PBV and price-to-sales – Chapters 17, 18, 19 & 20

**Text 3:** Fundamentals of Financial Accounting, 3<sup>rd</sup> ed., Phillips, Libby & Libby, McGraw-Hill

1. Business Decisions and Financial Accounting – Chapter 1
2. The Balance Sheet – Chapter 2
3. The Income Statement – Chapter 3

Recommended Ratio Analysis website:

<http://www.dinkytown.net/java/Ratios.html>

### **Recommended Reading**

*The Wall Street Journal*

### **Grading**

Learning Exercises	45%
Project	35%
Exam (open book and notes)	20%

Two peer evaluations are required in this module. They are not part of your final grade. The peer evaluation form is posted under Syllabus in Course Documents.

### **Learning Exercises:**

1. Descriptive statistic, probability distributions, sampling distributions
2. Confidence intervals, hypothesis tests, regression analysis
3. Model building in Excel with Linear Programming

### **Project**

Within the last year PepsiCo, Inc. has astonished investors with its stellar performance. The company's earnings have surpassed analysts' expectations several times and the stock price has responded accordingly, increasing more than 20% in the last six months alone. However, more recently, in spite of good corporate and macroeconomic news, many analysts started downgrading PepsiCo. Is this a sign that PepsiCo is overvalued? In order to find out, the Chairman and CEO of the company, Ms. Indra Nooyi, has hired you as her equity valuation consultants to find out PepsiCo's true market value of equity. To satisfy her request, you have decided to do a thorough valuation analysis based on the discounted cash flow to the firm model, as well as on several relative valuation techniques including PE, EV/EBITDA, PBV and price-to-sales and estimate the company's stock price under each valuation method. The full description of the project is posted under Project in Course Documents.

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## Module Schedule

<u>Activity</u>	<u>Due Date</u>
Learning Exercise 1	Monday August 12
Learning Exercise 2	Tuesday, September 3
Learning Exercise 3	Monday, September 16
Peer Evaluation 1	Thursday, August 29
Peer Evaluation 2	Wednesday, October 9
Deliverables 1-3	Monday, September 9
Preliminary Presentation Slides	Friday, October 4
Presentations	Friday, October 11
Exam	Saturday, October 12

### Online meetings with Iuliana:

1. Thursday, Aug 1, 8:30 – 10:00 pm
2. Tuesday, Aug 6, 8:30 – 10:00 pm
3. Monday, Sept 23, 8:30 – 10:00 pm
4. Monday, Sept 30, 8:30 – 10:00 pm
5. Additional times as needed

### Online meetings with Fred:

1. Wednesday, Aug 7, 8:30 – 10:00 pm
2. Wednesday, Aug 14, 8:30 – 10:00 pm
3. Wednesday, Aug 21, 8:30 – 10:00 pm
4. Wednesday, Sept 4, 8:30 – 9:30 pm
5. Additional times as needed

### Module Policies

- Make-up exams will be given only in the case of illness, documented by a doctor.
- There are no “extra credit” projects that can be done to improve a grade.
- Silence your cell phones during class.
- Academic integrity is important. Cheating will be dealt with harshly. The Graduate Catalogue states:  
*“Students must accept the responsibility to be honest and to respect ethical standards in meeting their academic assignments and requirements. Integrity in academic life requires that students demonstrate intellectual and academic achievement independent of all assistance except that authorized by the instructor.  
The use of an outside source in any academic paper, report or submission for academic credit without the appropriate acknowledgement is plagiarism. It is also academically dishonest to submit anything in electronic form as one’s own that is the work, either fully or in part, of someone else. It is unethical to present as one’s own work, the ideas, words or representations of another without the proper indication of the source. Therefore, it is the student’s responsibility to give credit to any quotation, idea or data borrowed from an outside source.  
Students who fail to meet the responsibility for academic integrity subject themselves to sanctions ranging from a reduction in grade or failure in the assignment or course in which the offense occurred to suspension, dismissal or expulsion from the University.”*
- Late assignment submission:

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- Within two days: reduced grade
- After two days: maximum grade 65%
- Not handed in at all: 0

**Academic Integrity:** An integral part of any educational system is to instill in its students an appreciation and practice of moral conduct. All members of the Pace community are expected to follow Pace University Academic Integrity Code, which expresses the University's philosophy of academic integrity, describes conduct that violates the Code, and sets forth applicable policies, procedures, and sanctions. In the Lubin School of Business, it is possible for your instructor to give you an F for assignments in which there is evidence of an infraction of academic integrity, an F for the class in which one or more of these infractions took place, or even request that you be suspended or expelled from the school. Academic integrity infractions can include, but are not limited to, copying and presenting the work of another student or resource as your own, using unauthorized resources such as an instructor's manual to complete assignments, copying the work of others during an exam, failing to reference the work of others or creating fake references in your assignments. When in doubt about what might be considered an academic integrity infraction, the best course of action is to ask your instructor for clarification so that you can avoid the potentially extreme penalties noted here.

### **Reasonable Accommodations for Students With Disabilities:**

The University's commitment to equal educational opportunities for students with disabilities includes providing reasonable accommodations for the needs of students with disabilities. To request an accommodation for a qualifying disability, a student must self-identify and register with the Coordinator of Disability Services for his or her campus. No one, including faculty, is authorized to evaluate the need and arrange for an accommodation except the Coordinator of Disability Services. Moreover, no one, including faculty, is authorized to contact the Coordinator of Disability Services on behalf of a student. For further information, please see Information for Students with Disabilities on the University's web site.