

BOROUGH OF MANHATTAN COMMUNITY COLLEGE
City University of New York

Business Management Department



BUS 210 Business Methods

Title of Course: Business Methods
Class Hours: 3
Semester:

Course Number: BUS 210 Section ____
Credits: 3

1. Course Coordinator: Dr. Jeff S. Hong

Tel: 212)220-8388 (shong@bmcc.cuny.edu)

2. Day and Time:

3. Required Texts:

[Practical Business Math Procedures](#), Jeffrey Slater, McGraw-Hill, 2016 (12e)
(ISBN: 1308960964)

Optional: **Excel Workbook for use with Practical Business Math Procedures**, Jeff S. Hong, McGraw-Hill, 2008 (9e) or up (ISBN 978-0-7-327854-4)

4. Office & Office Hours: F730L TBD

5. Course Description

A survey of the fundamental quantitative concepts and tools used in the field of business is presented. Topics include present value, compound interest, annuities, amortization, markup and markdown, inventory, depreciation, breakeven analysis, elasticity, graphing, equations, inequalities and certain aspects of linear-programming.

The computational nature of the course naturally lends itself to instruction in a computer-enhanced environment. The various formulations for calculation can be simplified, easily implemented, and best performed in the computer lab. The students learn not only to formulate the problems and run the given model, but also to develop and program their own model to explore new and creative ways to solve the problem.

All lecture notes in electronic format, the complete lecture in Excel format, solutions and samples are available at the [class discussion group](#), and these materials can be accessed on line.

Prerequisites and/or (Co-requisites): All remediation, (MAT 150/ MAT160, MAT 200, MAT 206)

6. Course Objective

a	To enhance the students' understanding and appreciation of the rigor and reasoning process of quantitative analysis and modeling
b	To develop the students' skill and expertise in using a quantitative approach in analyzing and solving business problems

c	To provide the students with an information base of mathematical operations needed to solve practical business problems related to economic, finance and accounting topics
d	To develop the students' skills and expertise in the use of EDP and quantitative software such as Excel and Mathematica as business tool

7. Student Learning Outcomes

Upon completion of the course, the students should be able to:

a	Read and contrast basic statistical and economic data series, charts and graphs;	Homework, Quiz
b	Identify, comprehend and analyze the quantitative nature of the business problems in topics such as depreciation, inventory valuation/estimation, breakeven analysis, financial statements, ratio analysis, simple/compound interest/discount, annuities and amortization;	Homework, Exam
c	Logically and mathematically reason out and formulate computer-based models to solve the problems;	Homework, Exam
d	Present the solutions by using an optimal combination of verbal, graphic and numerical techniques;	Homework, Project
e	Interpret the business and economic problems and issues at large in quantitative terms, and use computer-based modeling as a major tool in solving these problems;	Exam, Project

Below are the college's general education goals. The goals that are checked in the left-hand column indicate goals that will be covered and assessed in this course.

	General Education Goals	Measurements (means of assessment for general education goals)
<input type="checkbox"/>	Communication Skills- Students will write, read, listen and speak critically and effectively.	
<input checked="" type="checkbox"/>	Quantitative Reasoning- Students will use quantitative skills and the concepts and methods of mathematics to solve problems.	Interpret the financial and economic issues at large in quantitative terms, identify & analyze the quantitative nature of these problems; Utilize intermediate-level mathematical & statistical techniques to evaluate investment opportunities and perform analysis. (Homework, Exam, Quiz)
<input checked="" type="checkbox"/>	Scientific Reasoning- Students will understand and apply the concepts and methods of the natural sciences.	Make observations based on data to identify possible correlation/causality between random variables; identify & analyze functional relationship between potentially interdependent factors; set up hypotheses to explain these relationships; and possibly build & run a model to statistically test hypotheses. (Homework, Project)
<input type="checkbox"/>	Social and Behavioral Sciences- Students will understand and apply the concepts and	

	methods of the social sciences.	
	Arts & Humanities- Students will develop knowledge and understanding of the arts and literature.	
<input checked="" type="checkbox"/>	Information & Technology Literacy- Students will collect, evaluate and interpret information and effectively use information technologies.	Interpret the financial and economic issues at large in quantitative terms, identify, comprehend and analyze the quantitative nature of these problems and use information technology as a major tool to research and find solution to these problems. (Homework, Project)
<input type="checkbox"/>	Values- Students will make informed choices based on an understanding of personal values, human diversity, multicultural awareness and social responsibility.	

8. Course Outline



Topic 1: [Simple Interest & Discount](#)



Topic 2: [Compound Interest](#)



Topic 3: [Financial Statements](#)



Topic 4: [Pricing & Purchasing](#)



Topic 5: [Inventory & Overhead](#)



Topic 6: [Depreciation \(Cost Recovery\)](#)



Extra Topic: [Stocks & Bonds](#)



Extra Topic: [Taxes & Insurance](#)

9. Exam Policy and Grading Criteria

1. Midterm: 30%
2. Final: 30%
3. Homework & Quizzes: 30%
4. Attendance: 10%

10. Attendance & Class Participation

At BMCC the maximum number of absence is limited to one more hour than the number of hours a class meets in one week. For example, if you are enrolled in a 4 hour class that meets 2 times a week, you are allowed 5 hours of absence (not 5 days). **In the case of excessive absence,**

the instructor has the option to lower the grade or assign an "F" or "WU" grade.

Detailed Course Outline (Lesson Plan)

<u>Week</u>	<u>Topic</u>	<u>Evaluation</u>
1-2	Simple Interest <ul style="list-style-type: none"> • US Rule of Partial Payment 	
3-4	Simple Discount <ul style="list-style-type: none"> • Discounting Accounts Payable / Interest-Bearing/ Non-Interest-Bearing Notes (Factoring) • Effective Interest Rate 	Homework 1
5-6	Compound Interest (Time Value of Money) <ul style="list-style-type: none"> • Single Cash Flow Models <ul style="list-style-type: none"> ○ Compounding & Discounting <ul style="list-style-type: none"> ▪ Solving for FV, PV, RATE, and NPER ▪ Mathematical Derivations of FV, PV, RATE, and NPER ▪ Compounding at higher frequency “<i>m</i>” ▪ Continuous Compounding in the limit where $m \rightarrow \infty$ ▪ Review of Properties of Exponent ▪ Euler’s number & Exponential function ▪ Logarithm & Natural Log ▪ Effective Interest Rate aka EAR/AER/APY ▪ Rule of 72 	
7	Compound Interest (Time Value of Money) <ul style="list-style-type: none"> • Multiple Cash Flow Models <ul style="list-style-type: none"> ○ Compounding & Discounting in Annuities <ul style="list-style-type: none"> ▪ Examples of FVA in life ▪ Solving for FVA, PMT, and NPER ▪ Mathematical Derivations of FVA, PMT, and NPER ▪ Examples of PVA in life ▪ Solving for PVA, PMT, and NPER ▪ Mathematical Derivations of PVA, PMT, and NPER ▪ Amortization ▪ Building Amortization Schedule 	Homework 2 Midterm
8-9	Financial Statements <ul style="list-style-type: none"> • Income Statement <ul style="list-style-type: none"> ○ Structure & Components <ul style="list-style-type: none"> ▪ Parallel between Income Statement structure and Mark-up/down & Cost Ratio in Pricing (Preview) • Balance Sheet <ul style="list-style-type: none"> ○ Structure & Components ○ “IF” command in Balance Sheet Adjustment • Common-Size Statements, Vertical & Horizontal Analyses 	

	<ul style="list-style-type: none"> • Ratio Analysis & Fundamental Analysis <ul style="list-style-type: none"> ○ Ratio Categories & Ratio Variables ○ Industry Average & Industry Statistics 	Homework 3
10-11	Pricing & Purchasing <ul style="list-style-type: none"> • Structure & Composition of Price • Parallel between Income Statement structure and Mark-up/down & Cost Ratio in Pricing • Implication to Inventory Estimation • Breakeven Analysis • Target Profit Analysis • Shape of Total Revenue Curve • Transfer Pricing 	
12-13	Inventory & Overhead <ul style="list-style-type: none"> • Valuation of Ending Inventory <ul style="list-style-type: none"> ○ CGS & Ending Inventory ○ WAVG ○ FIFO ○ LIFO ○ “IF” command in FIFO & LIFO ○ “SUMPRODUCT” command in extended period FIFO & LIFO • Inventory Estimation <ul style="list-style-type: none"> ○ Gross Profit Method ○ Retail Method ○ Mark-up/down & Cost Ratios • Planned Purchase & Open to Buy 	Homework 4
14-15	Depreciation <ul style="list-style-type: none"> • Non-Current Asset side of Balance Sheet • Operating Expense side of Income Statement • Terminology • Straight-line Depreciation <ul style="list-style-type: none"> ○ Full-year Model ○ Partial-year Adjustment ○ When service life is in max output-level (production units) • Accelerated Depreciation <ul style="list-style-type: none"> ○ Sum-of-Digits (Rule of 78) Method <ul style="list-style-type: none"> ▪ Full-year Model ▪ Partial-year Adjustment ○ Declining Balance Method <ul style="list-style-type: none"> ▪ Full-year Model ▪ Partial-year Adjustment 	Homework 5
		Final