

JEFFERSON COLLEGE
COURSE SYLLABUS

MGT103

BUSINESS MATHEMATICS

3 Credit Hours

Prepared by
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Revised by
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MGT103 Business Mathematics

I. CATALOGUE DESCRIPTION

- A. Pre-requisite: Accuplacer Elementary Algebra score of at least 31 within the past two years, ACT math score of 16 or higher within the past two years, or MTH 084 with a grade of “B” or better.
Pre-requisite/Co-requisite: Reading proficiency
- B. 3 Semester Hours Credit
- C. Business Mathematics deals with applying math to business situations. Topics covered include trade and cash discounts, merchandise pricing, depreciation, financial statement analysis, and simple and compound interest (F, S, Su, O).

II. EXPECTED LEARNING OUTCOMES/CORRESPONDING ASSESSMENT MEASURES

Demonstrate mathematical and computational skills necessary for subsequent business courses applications.	In-Class Exercises, Discussions, Quizzes, and Exams.
Solve problems dealing with percentages.	In-Class Exercises, Worksheets, Quizzes, and Exams.
Apply mathematics to the buying and selling of merchandise.	In-class exercises, worksheets, quizzes, and exams.
Solve problems involving interest, principal, and time.	In-class exercises, worksheets, projects, and exams.
Analyze business problems by evaluating financial statements.	In-class exercises, worksheets, and exams.
Complete bank reconciliation and determine interest calculations on credit cards.	In-class exercises, worksheets, projects, and exams.

III. OUTLINE OF TOPICS

- A. Introduction and a Review of Basic Mathematical Calculations
1. Reading and rounding of whole numbers, review of fractions, reading and rounding of decimal numbers, converting fractions to decimals and converting decimals to fractions.

- B. Bank Records
 - 1. Explores the proper way to fill out forms used with a checking account: the check, check register, check stub, and deposit slip.
 - 2. The proper technique used to perform bank reconciliation.

- C. Review Basic Math and Bank Records
 - 1. To review basic math calculations and to become familiar with the bank records involved with a checking account:
 - a. Whole numbers, fractions, decimals
 - b. Checking account forms
 - c. Bank reconciliation

- D. Percents and their Applications in Business
 - 1. Define a percent and show the relationship of percents to decimals and fractions and how they are converted from one to another
 - 2. Define the components of the percentage formula and the correct formula to use in order to obtain each of the components: Part, Rate, and Base.

- E. Invoices, Trade and Cash Discounts
 - 1. Define trade discounts and why they are given to retailers and wholesalers. Define the difference between single trade discounts and chain/series discounts, and be able to calculate each type.
 - 2. Define cash discounts and the components involved with cash discounts. Be able to calculate cash discounts, determine discount periods and credit periods. Become aware of freight terms, and how partial payments can be used to take advantage of cash discounts.

- F. Review Percents, Percentage Formula, Trade Discounts, and Cash Discounts
 - 1. To become familiar with percents and how they are used in trade and cash discounts:
 - a. Percentage formula
 - b. Single and chain discounts
 - c. Cash discounts

- G. Retail Pricing (Markup and Markdown)
 - 1. Demonstrate the two different methods used by retailers, wholesalers, and manufacturers to determine the price on their merchandise (cost-based and retail-based pricing).
 - 2. Define markdowns and show the proper methods of calculating both one- time markdowns and a series of markdowns.
 - 3. Demonstrate the method used in pricing perishable products and the components that must be considered.

- H. Review Retail Pricing
1. To learn the different methods used in pricing products and the marking down of products:
 - a. Cost-based pricing
 - b. Retail-based pricing
 - c. Pricing perishable products
 - d. Markdowns
- I. Simple Interest and Promissory Notes
1. Define simple interest and the variables involved with simple interest. Calculate each variable with the appropriate formula. Variables included are interest, principal, rate, and time.
 2. To be able to calculate simple interest, other variables of simple interest, and bank discount:
 - a. Interest
 - b. Principal
 - c. Rate
 - d. Time
- J. Compound Interest and Present Value of Money
1. Define compound interest and how it compares to simple interest. Demonstrate the different methods of calculating compound interest (formula method and table method). Define and calculate effective rate.
 2. Define and calculate the present value of money using the table method.
 3. To be able to calculate compound interest, effective rate and the present value of money:
 - a. Maturity value
 - b. Compound interest
 - c. Effective rate
 - d. Present value
- K. Review Simple Interest and Compound Interest

- L. Depreciation
 - 1. An exploration of the different methods used in determining depreciation expense. Methods covered include: straight line, units of production, sum of the years digits, double declining balance and modified accelerated cost recovery system.

- M. Review Depreciation
 - 1. To become familiar with depreciation and methods used in calculating depreciation:
 - a. Straight line
 - b. Units of production
 - c. Sum of the years digits
 - d. Double declining balance
 - e. MACRS

- N. Financial Statements and Ratios
 - 1. An overview of the income statement and balance sheet and why each statement is important to a business. Define vertical and horizontal analysis and perform each on a financial statement.
 - 2. Define financial ratios and calculate four basic ratios (current ratio, quick ratio, operating ratio, and gross profit margin ratio).

- O. Review Financial Statements and Ratios
 - 1. To become familiar with the income statement, balance sheet, and the information that can be derived from each:
 - a. Vertical analysis
 - b. Horizontal analysis
 - c. Ratio analysis

IV. METHOD(S) OF INSTRUCTION

- A. Lecture
- B. Worksheets
- C. Textbook

V. REQUIRED TEXTBOOK(S)

Contemporary Mathematics for Business & Consumers, (current edition), Robert A. Brechner, South Western/Cengage Learning 2012.

VI. REQUIRED MATERIALS

Notebook, paper, pencil, calculator, folder

VII. SUPPLEMENTAL REFERENCES

None

VIII. METHOD OF EVALUATION

Chapter Exams	50%
Homework/Quizzes	15%
Attendance/Participation	15%
Projects	20%

IX. ADA AA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Technology Center 101; phone 636-481-3169).

X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook (see College Website <http://www.jeffco.edu>).

XI. ATTENDANCE STATEMENT

Regular and punctual attendance is expected of all students. Any one of these four options may result in the student being removed from the class and an administrative withdrawal being processed: (1) Student fails to begin class; (2) Student ceases participation for at least two consecutive weeks; (3) Student misses 15 percent or more of the coursework; and/or (4) Student misses 15 percent or more of the course as defined by the instructor. Students earn their financial aid by regularly attending and actively participating in their coursework. If a student does not actively participate, he/she may have to return financial aid funds. Consult the College Catalog or a Student Financial Services representative for more details.

XII. OUTSIDE OF CLASS ACADEMICALLY RELATED ACTIVITIES

The U.S. Department of Education mandates that students be made aware of expectations regarding coursework to be completed outside the classroom. Students are expected to spend substantial time outside of class meetings engaging in academically related activities such as reading, studying, and completing assignments. Specifically, time spent on academically related activities outside of class combined with time spent in class meetings is expected to be a minimum of 37.5 hours over the duration of the term for each credit hour.