

## **MAT 105 Business Math**

### **MAT 105 Course Objectives**

Upon completion of this course, the student can:

1. Solve for the unknown quantity in a percentage, rate, and base problem.
2. Determine percent increase and decrease using markup and markdown applications.
3. Apply use of annual percentage rate and annual percentage yield to problems in finance.
4. Solve problems which involve the simple interest formula.
5. Calculate compound interest and compound amount.
6. Determine present and future values of an annuity.
7. Calculate periodic payment for a sinking fund.
8. Set up an amortization schedule and calculate the early payoff of a loan.
9. Solve problems involving installment buying and credit card usage.
10. Determine mortgage payment amount, closing costs, and total cost of a loan.
11. Compute annual and accumulated depreciation and book value using various depreciation methods.
12. Solve application problems involving the above competencies.

### **MAT 105 Course Outline**

#### I. Percents

- A. Percentage, Base and Rate
- B. Percent Increase and Decrease
- C. Markup and Markdown

#### II. Simple Interest

- A. Ordinary and Exact Methods
- B. Appropriate Use of Simple Interest Formula

#### III. Compound Interest

- A. Annual Percentage Rate
- B. Annual Percentage Yield
- C. Present and Future Value of Money

#### IV. Consumer Savings

- A. Annuity
- B. Sinking Fund

#### V. Fixed Installment Loans

- A. Amount of Periodic Payment, Finance Charge and Total Amount Paid
- B. Unearned Interest on Early Payoff

## VI. Credit Cards

- A. Average Daily Balance Method
- B. Unpaid Balance Method

## VII. Mortgages

- A. Closing Costs
- B. Truth in Lending Statements
- C. Amortization Schedule
- D. Total Cost of Loan

## VIII. Depreciation

- A. Straight-Line Method
- B. Declining-Balance Method
- C. Sum-of –the-Year’s Digits Method
- D. Accelerated Cost Recovery System