Eastern WV Community & Technical College
Master Course Record

Course Prefix and Number: MTH 115	
Course Title: Business Math	
Recommended Transcript Title (if over 40 characters) Business Math	
Date Approved/Revised: 1/16/09; 7/15/13; 10/16/13; 11/13/14; 10/13/16; 10/5/17	

Credit Hours: 3
Contact hours per week (Based on 15 week term):
    Lecture: 3
    Lab:

Prerequisite: Math ACT score 19 or higher; SAT math score 500 or higher; or ACCUPLACER Arithmetic score of 85 or higher.
Corequisite: MTH 115L if required by placement.
Pre/Corequisite:

Grading Mode: Letter Grade

Catalog Description: This course emphasizes how math is used in the world of personal and business finance. General arithmetic procedures will be reviewed and applied to specific consumer and business applications. Problem-solving skills are emphasized.
NOTE: This course does *not* satisfy the general education requirements for college-level math in A.A., A.S., and specified CAS and A.A.S. programs.

Course Outcomes:
1. Perform operations on whole numbers, fractions, decimals, and percents
2. Solve linear equations and applications modeled by a linear equation
3. Perform banking operations, calculate interest, and compute monthly payments and finance charges for installment buying
4. Calculate costs associated with mortgages, property taxes, and insurance
5. Calculate markup, markdown, cost, selling price, and breakeven point
6. Calculate various types of pay and compute payroll deductions
7. Read, analyze, and interpret financial reports
8. Read, calculate, and explain stock, bond, and mutual fund quotations
9. Compute business statistics

Implementation Cycle: Fall/Spring Semesters

Role in College Curriculum: (Check all that apply)
X **General Education Core**
    CAS and AAS: Administrative Support Technology, Automotive Technology, Wind Technology, Board of Governors, Technical Studies
    CAS ONLY: Business Management, Computer Application Specialist, Electro-Mechanical
X **Technical Core** CAS Administrative Support Technology
X **Restricted Elective** CAS and AAS Accounting and Business Management
  General Elective

Workforce Education
X **Other** Area of Emphasis: Administrative Support Technology

Course Fee: None

Instructor's Qualifications: Master's Degree ~~in Mathematics or Business Administration plus 18 graduate level Mathematics credits.~~ preferred with 18 graduate hours in Mathematics or Business Administration or related field.

Expanded Course Description

This course offers consumer math literacy and business math skills for individuals, employees, small business owners, and beginning entrepreneurs. It is instructor-led with a focus on student participation, collaborative learning and hands-on activities. Relevant Internet resources supplement the text content.

Expanded course outcomes:

1. Perform operations on whole numbers, fractions, decimals, and percents
    a. Read and write whole numbers
    b. Round whole numbers to a given place value
    c. Perform operations on whole numbers
    d. Identify different types of fractions
    e. Convert between mixed numbers and improper fractions
    f. Reduce fractions
    g. Rewrite a fraction with a new denominator
    h. Find a least common denominator
    i. Perform operations on fractions
    j. Round decimals to a given place value
    k. Convert between fractions and decimals
    l. Perform operations on decimals
    m. Convert among percents, decimals, and fractions
    n. Solve percent problems
    o. Calculate the rate of percent increase or decrease
    p. Translate phrases into mathematical expressions
    q. Read and write decimal numbers

2. Solve linear equations and applications modeled by a linear equation
    a. Solve linear equations
    b. Solve ~~word~~ application problems
    c. Evaluate formulas
    d. Solve a formula for a specified variable
    e. Solve a proportion for unknown values
    f. Use proportions to solve problems

3. Perform banking operations, calculate interest, and compute monthly payments and finance charges for installment buying
    a. Define banking terms

b. Perform banking operations

c. Reconcile a checking account statement

d. Calculate simple interest

e. Use the simple interest formula to find the unknown quantity

f. Determine maturity value

g. Calculate interest on partial payments

h. Calculate discount notes

i. Find proceeds

j. Calculate effective rates

k. Compare simple interest with compound interest

l. Determine compound interest

m. Calculate effective rates

n. Determine present value

o. Process installment buying and loan amounts

p. Calculate monthly payments

q. Determine finance charges for installment and revolving credit loans

r. Determine the APR of an installment loan by table lookup

s. Calculate the finance charges on credit card accounts

4. Calculate costs associated with mortgages, property taxes, and insurance

a. List types of mortgages available

b. Calculate mortgage schedules and payments

c. Determine the total cost of interest on a mortgage

d. Prepare an amortization schedule

e. Compute sales tax

f. ~~Compute excise tax~~

g. Calculate the tax rate in decimal

h. Convert between tax rate in decimal to percent or per amount of assessed value

i. Compute property tax due

j. Define the types of life insurance and calculate premiums

k. ~~Explain and calculate cash value and other nonforfeiture options~~

l. Calculate premiums on fire insurance

m. ~~Calculate refunds for canceled fire insurance~~

n. Explain and calculate insurance loss when coinsurance is not met

o. Calculate premiums on auto insurance

5. Calculate markup, markdown, cost, selling price, and breakeven point

a. Calculate markups and markdowns

b. Calculate cost or selling price of an item

c. Determine selling price to cover perishable items

d. Calculate a breakeven point

6. Calculate various types of pay and compute payroll deductions
    a. State the differences in pay periods
    b. Calculate gross pay
    c. Describe various pay methods, such as salary, hourly, piecework, or commission
    d. ~~Prepare and explain the parts of a payroll register~~
    e. Calculate overtime earnings
    f. Compute payroll deductions
7. Read, analyze, and interpret financial reports
    a. Explain the key items on the balance sheet and the income statement
    b. Explain and complete a vertical and horizontal analysis of a balance sheet or income statement
    c. ~~Explain and complete a trend analysis~~
    d. List and calculate financial ratios
8. Read, calculate, and explain stock, bond, and mutual fund quotations
    a. Read, calculate, and explain stock quotations
    b. ~~Calculate dividends and return on investment of common and preferred stock~~
    c. Compute and compare price-earnings ratios
    d. Read, calculate, and explain bond quotations
    e. ~~Compare bond yields to premiums and discounts~~
    f. ~~Explain and calculate net asset value and mutual fund commissions~~
    g. ~~Read and explain mutual fund quotations~~
    h. Define mutual fund
9. Compute business statistics
    a. Find mean, weighted mean, median, and mode
    b. Prepare statistical graphs
    a. ~~Find the range and standard deviation of data~~

Prepared by: Andrea Williams, Mathematics Faculty   10/5/17

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Name, Title   Date

Approved Per LOT Minutes

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Dean of Teaching and Learning   Date