COURSE PLAN

Course Number and Title: MTH 141 – Business Mathematics I

Prepared by: Math Department   Fall, 2017
                                                          (Date)

Approved by: *Janice R Shelton*   Fall, 2017
                  (Dean)   (Date)

I. Course Description

Provides instruction, review, and drill in percentage, cash and trade discounts, mark-up, payroll, sales, property and other taxes, simple and compound interest, bank discounts, loans, investments, and annuities.

Prerequisites: Competency in Math Essentials MTE 1-3 as demonstrated through the placement and diagnostic tests, or by satisfactorily completing the required MTE units or equivalent.

II. Introduction

The course satisfies the mathematics requirement for degree programs in Accounting, Administrative Support Technology, Business Management and related programs. The course is designed to provide the tools for solving mathematical problems in the context of business applications.

III. Student Learning Outcomes

Upon successful completion of this course, the student should be able to:

1. Solve application problems by interpreting the materials presented, including determining the nature and extent of the information needed, and present the answer in standard English.
2. Estimate and consider answers to mathematical problems in order to determine reasonableness.
3. Correctly calculate sums, differences, products and quotients of whole numbers, fractions and mixed numbers, and decimal numbers without the use of a calculator.
4. Perform basic calculator operations.
5. Solve a formula for any specified variable.
6. Convert decimal numbers and fractions to and from percents.
7. Solve word problems using the basic percentage formula.
8. Calculate percent increase and percent decrease.
9. Use the basic percentage formulas to calculate property taxes, assessment value and fair market value, and tax rates.
10. Identify the component parts of a check, check stub and deposit slip.

11. Complete the parts of a check register.
12. Reconcile a bank statement with a checkbook.
13. Calculate gross earnings based on salaries, commissions and wages.
14. Calculate overtime earnings for wages, salaries, and commissions.
15. Calculate FICA and Medicare taxes for employees and self-employed individuals.
16. Calculate Federal withholding taxes using the wage bracket and percentage methods.
17. Calculate State withholding taxes.
18. Calculate an employer's Federal Tax Liability.
19. Use the basic percentage formula to calculate trade, chain, quantity and cash discounts, and net cost.
20. Use complements to calculate net cost.
21. Calculate the equivalent single discount for a series discount.
22. Solve cash discount problems using ordinary dating, end-of-month dating, receipt-of-goods dating, or extra dating methods.
23. Determine the last date of a discount period.
24. Complete an invoice.
25. Calculate the selling price for an item using the formula for markup based on cost price.
26. Calculate the selling price for an item using the formula for markup based on selling price.
27. Solve markdown problems.
28. Determine the break-even point and the amount of a profit/loss.
29. Use the simple interest formula to solve loan problems.
30. Use the formulas for maturity value and present value for simple interest loans.
31. Use the compound interest formula.
32. Use compound interest tables to calculate interest.
33. Use tables to calculate present value and future value.
34. Use future value and present value to estimate the value of a business.

IV.   Instructional Methods

The primary instructional techniques will be lecture and problem solving. Emphasis will be on the discussion of problems comparable to practice exercises found in the homework assignments. Students will be encouraged to ask and respond to questions from either the instructor or another student. Class activities will include problem sessions, graded exercises and written tests.

V.   Instructional Materials

Textbook: Pearson Custom Business Skills (for New River Community College)
            Math XL 12-month Access Code (bundled with textbook)
            ISBN-13: 978-1-2693-2948-4

This textbook is the customized version of: Business Mathematics, Twelfth Edition
            Authors: Clendenen Saltzman and Miller, © 2012 Pearson/Addison Wesley

Calculator: Scientific calculator, TI-**30X IIS** or equivalent.

The testing centers on campus provide TI-**30X IIS** calculators for use on tests. ONLY the testing center issued calculator will be allowed on a test, no exceptions.

Paper, pencil, highlighter, and a binder or folder for written work. Ink is not to be used for any graded work.

VI.   Course Content

- Basic Arithmetic operations with whole numbers, fractions and decimals
- Percent and applications of the basic percentage formula
- Bank Statement reconciliation
- Earnings and payroll calculations
- Mathematics of buying
- Mathematics of selling
- Simple and Compound Interest

VII.   Evaluation

The grade for the course will be calculated from written in-class tests, MathXL assignments, a final exam and other work as deemed appropriate by the instructor. See individual syllabus for details on percentages/points.

VIII.   Attendance

Regular attendance at classes is required. When absence from a class becomes necessary, it is the responsibility of the student to inform the instructor prior to the absence whenever possible. The student is responsible for the subsequent completion of all study missed during an absence. Any instruction missed and not subsequently completed will necessarily affect the grade of the student regardless of the reason for the absence.

IX.   Cheating Policy

The giving or receiving of any help from another student or unauthorized individual on any graded portion of the course is considered cheating and will not be tolerated. The use of books, notes, electronic devices of any other unauthorized material during tests is considered cheating, and will not be tolerated. Any student found cheating will receive a grade of "0" on that assignment and may receive an "F" for the course. This "0" cannot be replaced by any other score.   Mobile phones are not permitted to be used as calculators.

X.   Withdrawal Policy

Student Initiated Withdrawal Policy

A student may drop or withdraw from a class without academic penalty during the first 60 percent of a session. For purposes of enrollment reporting, the following procedures apply:

a.   If a student withdraws from a class prior to the termination of the add/drop period for the session, the student will be removed from the class roll and no grade will be awarded.

b.   After the add/drop period, but prior to completion of 60 percent of a session, a student who withdraws from a class will be assigned a grade of "W." A grade of "W" implies that the student was making satisfactory progress in the class at the time of withdrawal, that the withdrawal was officially made before the deadline published in the college calendar, or that the student was administratively transferred to a different program.

c.   After that time, if a student withdraws from a class, a grade of "F" or "U" will be assigned. Exceptions to this policy may be made under documented mitigating circumstances if the student was passing the course at the last date of attendance.

A retroactive grade of "W" may be awarded only if the student would have been eligible under the previously stated policy to receive a "W" on the last date of class attendance. The last date of attendance for a distance education course will be the last date that work was submitted.

Late withdrawal appeals will be reviewed and a decision made by the Coordinator of Admissions and Records.

No-Show Policy

A student must either attend face-to-face courses or demonstrate participation in distance learning courses by the last date to drop for a refund. A student who does not meet this deadline will be reported to the Admissions and Records Office and will be withdrawn as a no-show student. No refund will be applicable, and the student will not be allowed to attend/participate in the class or submit assignments. Failure to attend or participate in a course will adversely impact a student's financial aid award.

Instructor Initiated Withdrawal

A student who adds a class or registers after the first day of class is counted absent from all class meetings missed. Each instructor is responsible for keeping a record of student attendance (face-to-face classes) or performance/participation (DE classes) in each class throughout the semester.

When a student's absences equal twice the number of weekly meetings of a class (equivalent amount of time for summer session), the student may be dropped for unsatisfactory attendance in the class by the instructor.

Since attendance is not a valid measurement for Distance Education (DE) courses, a student may be withdrawn due to non-performance. A student should refer to his/her DE course plan for the instructor's policy.

In accordance with the No-Show Policy, a student who has not attended class or requested/accessed distance learning materials by the last day to drop the class and

receive a refund must be withdrawn by the instructor during the following week. No refund will be applicable.

When an instructor withdraws a student for unsatisfactory attendance (face-to-face class) or non-performance (DE class), the last date of attendance/participation will be documented. Withdrawal must be completed within five days of a student's meeting the withdrawal criteria. A grade of "W" will be recorded during the first sixty percent (60%) period of a course. A student withdrawn after the sixty percent (60%) period will receive a grade of "F" or "U" except under documented mitigating circumstances when a letter of appeal has been submitted by the student. A copy of this documentation must be placed in the student's academic file.

The student will be notified of the withdrawal by the Admissions and Records Office. An appeal of reinstatement into the class may be approved only by the instructor.

XI. **Disability and Diversity Statements**

If you are a student with a documented disability who will require accommodation in this course, please register with the Disability Services Office located in the Advising Center for assistance in developing a plan to address your academic needs.

The NRCC community values the pluralistic nature of our society. We recognize diversity including, but not limited to, race ethnicity, religion, culture, social class, age, gender, sexual orientation and physical or mental capability. We respect the variety of ideas, experiences and practices that such diversity entails. It is our commitment to ensure equal opportunity and to sustain a climate of civility for all who work or study at NRCC or who otherwise participate in the life of the college.

Evacuation Procedure: Please note the evacuation route posted at the classroom doorway. Two routes are marked in case one route might be blocked.