WTCS Repository

10-804-144 Math of Finance

Course Outcome Summary

Course Information

Description Students will create financial timelines to solve financial problems. They will solve problems involving simple and compound interest. Students will use discounting to solve problems. They will calculate the components of ordinary and complex annuities. Students will solve problems using financial formulas, business calculators, and or tables. Finally, students will use descriptive statistics and spreadsheet applications to interpret financial data.

Total Credits 3.00

Target Population

Pre/Corequisites

Prerequisite Each Wisconsin Technical College determines the General Education course prerequisites used by their academic institution. If prerequisites for a course are determined to be appropriate, the final Course Outcome Summary must identify the prerequisites approved for use by the individual Technical College.

Course Competencies

1 Solve simple interest scenarios

Assessment Strategies
Math Assessment with Consumer/Business/Finance Applications

Criteria

Your performance will be successful when:

you identify the characteristics of simple interest
you compute principal, rate, or time using simple interest formula
you determine due date of a promissory note
you compute maturity value, principal, rate, and time using maturity value formula
you determine present and future values
you use simple interest to solve business/consumer scenarios
you apply partial payment methods
you answer with the precision of terms appropriate to the problem
you answer in the correct units of measure and labels

2 Solve simple (bank) discounting scenarios

Assessment Strategies
Math Assessment with Consumer/Business/Finance Applications

Criteria

Your performance will be successful when:

you identify the characteristics of simple discount
you compute maturity value, bank discount, discount rate, or time using appropriate formula
you determine due date of a simple (bank) discount note
you determine proceeds of a simple (bank) discount note
you differentiate between simple interest rate and simple (bank) discount rate
you re-discount a simple (bank) discount note
you calculate Annual Percentage Rate
you use simple (bank) discount to solve business/consumer scenarios
you answer with the precision of terms appropriate to the problem
you answer in the correct units of measure and labels

3 Solve compound interest scenarios

Assessment Strategies

Math Assessment with Consumer/Business/Finance Applications with a Financial Calculator

Criteria

Your performance will be successful when:

you convert between percents, decimals, fractions
you identify the base, rate and amount in problem
you compute the base, rate, or amount
you use percentages to solve business/consumer scenarios
you solve percent increase/decrease scenarios
you solve compound discount scenarios
you answer with the precision of terms appropriate to the problem
you answer in the correct units of measure and labels

4 Solve annuity scenarios

Assessment Strategies

Math Assessment with Consumer/Business/Finance Applications with a Financial Calculator

Criteria

Your performance will be successful when:

you identify the characteristics of an annuity
you differentiate between the present and future value of an annuity
you calculate the present and/or future values of an annuity
compute any unknown from given knowns in annuity scenarios
you apply ordinary annuity calculations to business/consumer/financial scenarios
you apply annuities due calculations to business/consumer/financial scenarios
you apply deferred annuity calculations to business/consumer/financial scenarios
you apply complex annuity calculations to business/consumer/financial scenarios
you apply forborne annuity calculations to business/consumer/financial scenarios
you answer with the precision of terms appropriate to the problem
you answer in the correct units of measure and labels

5 Solve amortization scenarios

Assessment Strategies

Math Assessment with Consumer/Business/Finance Applications Using a Financial Calculator and Spreadsheet Software

Criteria

Your performance will be successful when:

you calculate a loan payment
you calculate the amount of a sinking fund payment.
you calculate the future value of the sinking fund

you calculate the periodic interest associated with a sinking fund
you create amortization tables are created manually and via spreadsheet
you answer with the precision of terms appropriate to the problem
you answer in the correct units of measure and labels

6 Perform statistical calculations

Assessment Strategies

Math Assessment with Consumer/Business/Finance Applications with a Calculator

Criteria

Your performance will be successful when:

you interpret charted data
you construct charts/graphs
you determine the appropriate chart given the raw data
you calculate measures of central tendencies
you interpret measures of dispersion
you use statistics to solve business/consumer/finance scenarios
you answer with the precision of terms appropriate to the problem
you answer in the correct units of measure and labels