

## WTCS Repository

10-804-144 Math of Finance

# Course Outcome Summary

### Course Information

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|  | 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

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| --- | --- |
| 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

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| 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 |