
## 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 interestyou compute principal, rate, or time using simple interest formulayou determine due date of a promissory noteyou compute maturity value, principal, rate, and time using maturity value formulayou determine present and future valuesyou use simple interest to solve business/consumer scenariosyou apply partial payment methodsyou answer with the precision of terms appropriate to the problemyou 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 discountyou compute maturity value, bank discount, discount rate, or time using appropriate formulayou determine due date of a simple (bank) discount noteyou determine proceeds of a simple (bank) discount note you differentiate between simple interest rate and simple (bank) discount rateyou re-discount a simple (bank) discount note you calculate Annual Percentage Rateyou use simple (bank) discount to solve business/consumer scenariosyou answer with the precision of terms appropriate to the problemyou 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, fractionsyou identify the base, rate and amount in problemyou compute the base, rate, or amountyou use percentages to solve business/consumer scenariosyou solve percent increase/decrease scenariosyou solve compound discount scenariosyou answer with the precision of terms appropriate to the problemyou 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 annuityyou differentiate between the present and future value of an annuityyou calculate the present and/or future values of an annuitycompute any unknown from given knowns in annuity scenariosyou apply ordinary annuity calculations to business/consumer/financial scenariosyou apply annuities due calculations to business/consumer/financial scenariosyou apply deferred annuity calculations to business/consumer/financial scenariosyou apply complex annuity calculations to business/consumer/financial scenariosyou apply forborne annuity calculations to business/consumer/financial scenariosyou answer with the precision of terms appropriate to the problemyou 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 paymentyou calculate the amount of a sinking fund payment.you calculate the future value of the sinking fundyou calculate the periodic interest associated with a sinking fundyou create amortization tables are created manually and via spreadsheetyou answer with the precision of terms appropriate to the problemyou 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 datayou construct charts/graphsyou determine the appropriate chart given the raw datayou calculate measures of central tendenciesyou interpret measures of dispersionyou use statistics to solve business/consumer/finance scenariosyou answer with the precision of terms appropriate to the problemyou answer in the correct units of measure and labels  |