Chapter 130. Texas Essential Knowledge and Skills for Career and Technical Education

Subchapter F. Finance

§130.183. Financial Mathematics (One Credit), Adopted 2015.

(a)   General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Algebra I. This course satisfies a high school mathematics graduation requirement. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Finance Career Cluster focuses on planning, services for financial and investment planning, banking, insurance, and business financial management.

    (3)   Financial Mathematics is a course about personal money management. Students will apply critical-thinking skills to analyze personal financial decisions based on current and projected economic factors.

    (4)   The process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

    (5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (6)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A)   demonstrate an understanding of appropriate communication with customers, employers, and coworkers through verbal, nonverbal, or digital means;

        (B)   demonstrate an understanding of the use of business etiquette;

        (C)   demonstrate an understanding of appropriate customer service such as building customer relationships and resolving customer complaints; and

        (D)   demonstrate an understanding of ethical and legal issues in business.

(2)   The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

   (A)   apply mathematics to problems arising in everyday life, society, and the workplace;

   (B)   use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;

   (C)   select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;

   (D)   communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;

   (E)   create and use representations to organize, record, and communicate mathematical ideas;

   (F)   analyze mathematical relationships to connect and communicate mathematical ideas; and

   (G)   display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

(3)   The student demonstrates an understanding of the fundamental principles of money. The student is expected to demonstrate an understanding of various forms of financial exchange, including cash, checks, credit cards, debit cards, and electronic funds transfers.

(4)   The student demonstrates an understanding of employment earnings. The student is expected to:

   (A)   identify sources of income, including wages and salaries, interest, rent, dividends, and capital gains;

   (B)   compare common employee benefits such as health insurance and retirement plans;

   (C)   calculate gross pay;

   (D)   calculate payroll deductions, including federal taxes, state taxes, and city taxes, using current tax rates;

   (E)   evaluate the reasons for federal income taxation, Social Security taxation, and Medicare taxation, including earnings limitations as applicable;

   (F)   calculate net pay; and

   (G)   compare and contrast between independent contractor earnings and employee earnings, including tax requirements, tax forms (W-2, W-4, 1099, and Form 941), and benefit requirements.

(5)   The student demonstrates an understanding of the various federal taxes. The student is expected to:

   (A)   calculate federal income taxes, including the completion of a 1040EZ, using current rates;

   (B)   calculate capital gains tax using current rates;

   (C)   calculate self-employment tax using current rates;

   (D)   analyze estate and inheritance tax using current rates; and

   (E)   analyze gift tax using current rates.

(6)   The student demonstrates an understanding between the various financial institutions and accounts. The student is expected to:

   (A)   compare and contrast savings accounts, checking accounts, certificates of deposits, and other interest-bearing accounts;

   (B)   calculate simple interest;

      (C)   calculate compound interest;

      (D)   analyze a bank statement for accuracy;

      (E)   reconcile a bank statement; and

      (F)   calculate the time value of money.

(7)   The student demonstrates an understanding of the various types of credit. The student is expected to:

      (A)   examine the advantages and disadvantages of loans, including student loans;

      (B)   assess the advantages and disadvantages of credit cards;

      (C)   calculate the cost of using credit cards, including various financial fees;

      (D)   compare and contrast a bank loan, a credit union loan, and a pay-day loan;

      (E)   evaluate the process for a bank loan or a credit union loan; and

      (F)   analyze credit scores and understand the meanings of the scores.

(8)   The student demonstrates an understanding of home purchases. The student is expected to:

      (A)   calculate a mortgage payment with various additional principal payments;

      (B)   calculate property taxes;

      (C)   calculate mortgage insurance;

      (D)   calculate homeowner's insurance, including property damage insurance, liability insurance, flood insurance, and earthquake insurance;

      (E)   calculate closing costs;

      (F)   calculate mortgage tax deductions; and

      (G)   understand the usage of rental property for investment.

(9)   The student demonstrates an understanding of the difference between an automobile purchase and an automobile lease. The student is expected to:

      (A)   calculate a monthly payment;

      (B)   calculate sales tax and registration tax;

      (C)   calculate an amortization payment table with various additional principal payments;

      (D)   calculate a lease payment;

      (E)   compare the purchase of an automobile to a lease of an automobile;

      (F)   calculate depreciation of an automobile using straight-line depreciation and double-declining balance depreciation; and

      (G)   calculate automobile insurance.

(10)   The student demonstrates an understanding of stocks, bonds, and mutual funds as investments. The student is expected to:

      (A)   calculate the cost of buying and selling stocks and mutual funds, stock dividend yield, price-earnings ratio, return on investment, earnings per share, net asset value; and

      (B)   calculate the cost of buying and selling bonds, bond yield, and bond interest payment.

(11)   The student demonstrates an understanding of a diverse investment portfolio. The student is expected to create a diverse investment portfolio.

(12)   The student demonstrates an understanding of various types of insurance, including life insurance, health insurance, disability insurance, and cancer insurance. The student is expected to:

   (A) calculate the cost of a life insurance policy, including a term-life insurance policy, and permanent life insurance policies;

   (B) identify the type of life insurance needed and estimate the amount of life insurance needed;

   (C) calculate the cash value of a permanent life insurance policy;

   (D) calculate the cost of health insurance, including co-payments and out-of-pocket expenses;

   (E) calculate the cost of disability insurance; and

   (F) calculate the cost of cancer insurance.

(13) The student demonstrates an understanding of an Individual Retirement Account (IRA) and a 401(k). The student is expected to calculate IRA and 401(k) tax savings.

(14) The student demonstrates an understanding of a fixed pension, a variable pension, social security, and an annuity. The student is expected to identify an annuity and to calculate the future value of an annuity.

(15) The student demonstrates an understanding of wills and trusts. The student is expected to identify the components of wills and trusts and their impacts on tax liability and their use of annuities.

(16) The student demonstrates an understanding of the budgeting process. The student is expected to create, balance, and evaluate a comprehensive personal budget, including fixed expenses and variable expenses.

(17) The student demonstrates an understanding of identity theft. The student is expected to create a plan for prevention of identity theft and for the reporting of identity theft.

(18) The student demonstrates an understanding for a postsecondary plan. The student is expected to:

   (A) understand educational, military, and current job opportunities; and

   (B) create a postsecondary plan that includes topics such as application requirements; testing requirements; certification requirements; associated deadlines; associated costs, including living expenses; job prospects and opportunities; beginning earnings; expected future earnings; and resumes and cover letters.