

Money & Banking Curriculum

<p>Course: Money & Banking BUAD222</p>	<p>Standard 1: Career Development: Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions. Standard 2: Integrated Learning: Students will demonstrate how academic knowledge and skills are applied in the workplace. Standard 3b: Career Majors Students who choose a career major will acquire the career-specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.</p>			
<p>Performance Indicators - LWDAT</p> <ul style="list-style-type: none"> ▪ Work collaboratively with other students to problem solve and analyze cases ▪ Identify and explain the content and reporting of information on pay stubs ▪ Explain why understanding your pay stub is crucial ▪ Analyze and interpret the computation equations ▪ Evaluate the importance of calculating pay properly ▪ Prepare timecards ▪ Analyze and interpret the differences in tax tables ▪ Identify, explain, and apply taxation tables ▪ Analyze business transactions ▪ Prepare tax forms for employment ▪ Explain and identify the process of purchasing, leasing and/or renting a new or used vehicle ▪ Compute and analyze insurance costs ▪ Compute and analyze vehicle pricing structures ▪ Compute maturity dates and interest values ▪ Compute Closing Costs ▪ Explain and analyze allocation of monthly payments ▪ Apply and compute total housing costs 	<p>Essential Questions</p> <p>Chapters - 1 – 3 Mishkin 1. Why study money, banking and financial markets? 2. What is the function of financial markets? 3. What is money?</p> <p>Chapters – Lange/Rousos 1. What does your pay stub really mean? 2. How would your community be affected if there were no state income tax? 9. What can you do to prepare for a vehicle purchase? 10. Buying a home can be a sound investment that makes financial sense. Why is this true? When is it not?</p>	<p>Essential Knowledge & Skills</p> <ul style="list-style-type: none"> ▪ The bond and stock market ▪ Structure of financial markets ▪ Function of Money ▪ Calculate straight time, OT & Total Pay ▪ Weekly Timecards ▪ Piecework computations ▪ Determine Salary ▪ Commissions and Gross Pay ▪ Federal Income Tax Tables ▪ Compute state taxes ▪ Social Security and Medicare Taxes ▪ Calculate deduction for group insurance ▪ Calculate net pay per pay period ▪ Compute sticker price ▪ Calculate dealer cost ▪ Calculate book value of a used vehicle ▪ Premiums for vehicle insurance ▪ Costs for operating, and maintaining a vehicle ▪ Leasing vs. buying ▪ Vehicle renting costs ▪ Computing mortgage loans ▪ Determining monthly payments, total amount paid, and total interest charged ▪ Closing Costs ▪ Allocation of monthly payment ▪ Assessed value and real estate taxes ▪ House Insurance 	<p>Classroom Ideas</p> <p>Key Word Review</p> <p>Charting money growth</p> <p>Locate historical interest rate data and chart</p> <p>Growth Rate and Inflation probs</p> <p>Living in the Real World</p> <p>Global Perspective Wages by education</p> <p>Thinking Critically – Substituting in Formulas</p> <p>Error Analysis</p> <p>Parallel taxation with local spending</p> <p>Closing Activity and Error Analysis www.kellybluebook.com & others for Ins. Comparing same vehicles different dealerships</p>	<p>Assessment Ideas</p> <p>Case Analysis & Chapter Questions</p> <p>Chapter Problems and Exercises</p> <p>“Workshop” Activities & Case Studies</p> <p>Reinforcement Problems</p> <p>Quick Quiz</p> <p>sheet and charting comparisons and contrasts</p> <p>Real Estate Careers Dream Homes</p> <p>You’ve just inherited \$10,000 – how should you invest it and why?</p> <p>Why is counting currency an inadequate measure of money?</p>

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<ul style="list-style-type: none"> Compare and contrast 		<ul style="list-style-type: none"> Calculate a homeowner's premium Compute total housing costs compare is with suggested guidelines 	<p>New vs. Used Calculating Mortgage calculators</p>	
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<p>Performance Indicators LWDAT</p>	<p>Essential Questions</p>	<p>Essential Knowledge & Skills</p>	<p>Classroom Ideas</p>	<p>Assessment Ideas</p>
<ul style="list-style-type: none"> ▪ Work collaboratively with other students to problem solve and analyze cases ▪ Explain and identify effective annual yield ▪ Calculate ROI ▪ Prepare VSE Portfolios ▪ Compute and record stock investments ▪ Analyze the importance of understanding monetary principle and understanding a strong rate of return. 	<p>Mishkin Chapter 7: How do you compute the price of common stock? Chapter Lange/Rousos 12. What kinds of investments are right for you?</p>	<ul style="list-style-type: none"> ▪ Effective Annual Yield ▪ Commissions on stock investments ▪ Calculating profits and losses from the sale of investments ▪ Bond Investments ▪ Compute interest on CD's ▪ Monetary principle and rational expectations 	<p>Key Word Review Living in the Real World Quiz Bowl Business Notes: Growth & Income Stocks VSE Analysis of Risk and Return Do stock prices always rise when the economy is doing well? Compute stock prices with a "required" return rate. Review stock indices and chart the current month</p>	<p>Case Analysis & Chapter Questions Chapter Problems and Exercises "Workshop" Activities & Case Studies Quarterly compounding tables Stock Tables www.virtualstockexchange.com and www.dsmarketwatch.com Observe stock trends and make a forecast for the next five years</p>

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<p>Performance Indicators LWDAT</p> <ul style="list-style-type: none"> ▪ Work collaboratively with other students to problem solve and analyze cases ▪ Identify what makes up a finance charge ▪ Analyze the importance of paying on time and paying off debt ▪ Compute finance charges ▪ Compare and contrast the differences in the unpaidbalance method and average daily balance method ▪ Compute maturity values ▪ Analyze interest rates and borrowing guidelines ▪ Explain and analyze the uses of loans ▪ Calculate interest as it relates to partial years ▪ Analyze the conditions of what constitutes a financial crisis. 	<p>Essential Questions</p> <ol style="list-style-type: none"> 8. Mishkin – Chapters How do transaction costs influence financial structure? 9. What is a financial crisis? <p>Lange/Rousos Chapters 7. If you have a \$1,000 balance on a credit card with a 15% interest rate, and you only pay the minimum amount of \$25 each month, how long will it take to pay off the debt in full? How much interest will you have paid? Can you really afford it? 8. How would you calculate the maturity value and simple interest rate on an installment loan?</p>	<p>Essential Knowledge & Skills</p> <ul style="list-style-type: none"> ▪ Calculate new balance on a charge account ▪ Calculate a finance charge by using the unpaid- balance method ▪ Calculate the finance charge based on the average-daily-balance method ▪ Compute Maturity Value ▪ Calculate the amount financed on an installment loan ▪ Calculate monthly payments, total repay, and finance charge on an installment loan ▪ Principal vs. Interest ▪ Use tables to find the annual percentage rate of a loan 	<p>Classroom Ideas</p> <p>Key Word Review</p> <p>Living in the Real World</p> <p>www.bankrate.com</p> <p>Finance Charges – Calculations</p> <p>Rate of Exchange</p> <p>Compare and Contrast Charge Account</p> <p>Applications from banks and businesses</p> <p>How would life be different if loans didn't exist?</p> <p>Current Interest Rate research – Prime Rate</p> <p>Days in a month, year – what's it have to do with interest?</p> <p>Etrade vs. brokers you personally work with</p> <p>Portfolio management – domestics vs. international/s/ globals – compare and contrast the advantages/disadvantages</p>	<p>Assessment Ideas</p> <p>Case Analysis & Chapter Questions</p> <p>Chapter Problems and Exercises</p> <p>"Workshop" Activities & Case Studies</p> <p>www.bankrate.com</p> <p>Evaluate Advertising Maximum</p> <p>Interest Rates – different states – diff. rates</p> <p>Math Studio</p> <p>The Perfect Loan? Credit Analysis and Borrowing Power – How are they related?</p> <p>Who was Enron? What happened?</p> <p>What happened to influence the occurrence of the Great Depression – compare and contrast that to 2007-2009. What has happened to prevent it from occurring again? Have we done enough?</p>

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BUAD222	choose a career major will acquire the career- specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.			
Performance Indicators - LWDAT	Essential Questions	Essential Knowledge & Skills	Classroom Ideas	Assessment Ideas
<ul style="list-style-type: none"> ▪ Work collaboratively with other students to solve and analyze cases ▪ Compare and contrast different insurance plans ▪ Compute and analyze health insurance premiums ▪ Compare and contrast annual premiums for three types of insurance regulation works. ▪ Compare and contrast how technology has changed how we bank. 	<p>Mishkin 10. What is the bank balance sheet? 11. What is financial regulation? 12. How has technology changed how we bank?</p> <p>Lange/Rousos Chapter 11. When will you ever use health insurance?</p>	<ul style="list-style-type: none"> ▪ Liabilities, checkable deposits, borrowings, and bank capital ▪ Assets ▪ Asset and Liability Management ▪ Return on equity ▪ Managing credit risk ▪ Compute health insurance premiums ▪ What do we really pay for health care? ▪ Utilize tables to compute the annual premium for term life insurance ▪ Apply tables to data to compute the annual premiums for three types of life insurance. ▪ Moral Hazard and the Government safety net ▪ Leverage ratio and risk-based capital requirements ▪ Clicks vs. Bricks 	<p>Key Word Review Living in the Real World PPO's HMO's Calculating health insurance premiums Research the insurance industry Life Insurance – Lifestyle choices and Cost Use T accounts to describe transactions and manage the balance sheet equation Create a simple income statement Create a simple balance sheet Assessing risk – what is it and what is the potential loss or gain What is consumer protection and what can we do with it to protect our investments and future? Time Table – major financial legislation in the United States</p>	<p>Case Analysis & Chapter Questions Chapter Problems and Exercises “Workshop” Activities & Case Studies Compare/Contrast Health Insurance Plans Math Studio Calculate return on investment Create an oral presentation to show what actions could be taken to reduce a bank's interest-rate risk www.myeconlab.com Create user friendly banking posters to help educate consumers Compare/contrast community credit unions to nationwide banks Bitcoin – What is it and how does it impact our economy?</p>

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Students who choose a career major will acquire the career-specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.

Performance Indicators - LWDAT	Essential Questions	Essential Knowledge & Skills	Classroom Ideas	Assessment Ideas
<ul style="list-style-type: none"> Work collaboratively with other students to solve and analyze cases Understand the structure of the Federal Reserve system. Evaluate the purpose of Federal Reserve banks. Evaluate the role of the chairman of the Federal Reserve. Understand the structure and independence of foreign central banks Evaluate and analyze the three players in the money supply process. 	<p>Mishkin Chapters 13. What is the Federal Reserve and what is its purpose?</p> <p>14. Who are the three "players" in the money supply process?</p>	<ul style="list-style-type: none"> Origins of the Federal Reserve Structure of the Federal Reserve System Federal Reserve banks Member banks FOMC Green, Blue, Teal and Beige – what do these colors mean to the FOMC? How independent is the Fed? What is the European Central bank? Central bank, Banks, and Depositors The Fed's Balance Sheet Monetary Base 	<p>Key Word Review</p> <p>www.myeconlab.com</p> <p>Create a jigsaw of the Federal Reserve, it's purpose, it's power, and it's impact on the global economy</p> <p>"The Federal Reserve System resembles the US Constitution in that it was designed with many checks and balances." Is this statement true, false, or uncertain? Explain your answer.</p> <p>What are Federal Reserve Districts? Map them.</p> <p>Monetary Base calculations</p> <p>Calculate simple deposit multipliers</p> <p>Create a visual aid of the money supply process including variables and changes</p>	<p>Case Analysis & Chapter Questions</p> <p>Chapter Problems and Exercises</p> <p>"Workshop" Activities & Case Studies</p> <p>www.myeconlab.com</p> <p>Go to www.federalreserve.gov and click on Monetary Policy. Then click on Reports and go on Beige Book – is the economy strengthening or weakening?</p> <p>Calculate current ratios and excess reserve ratios – what are they and why do we calculate them?</p> <p>Application: The 2007-2009 Financial Crisis and the Money Supply</p>

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Performance Indicators - LWDAT	Essential Questions	Essential Knowledge & Skills	Classroom Ideas	Assessment Ideas
<ul style="list-style-type: none"> Work collaboratively with other students to problem solve and analyze cases Analyze and define monetary theory. Understand and explain quantity theory and inflation Compare and contrast interest rates Research and report on supply curves and how they are affected by unemployment and inflation Define and apply the theory of money 	<p>Mishkin Chapters 19. What is monetary theory? 22. What is aggregate demand?</p>	<ul style="list-style-type: none"> Quantity theory of money Velocity and demand for money Quantity theory and inflation Budget deficits and inflation Interest rates and money demand Aggregate output, unemployment and inflation Aggregate supply Supply curves Equilibrium 	<p>Key Word Review Living In the Real World How do we calculate velocity of money? Compare and contrast US inflation and money growth rates by decade What is our current inflation rate? What is your prediction for the next 10 years for inflation? Support your analysis. What can you do to prevent being unemployed? Compare and Contrast: Expected inflation, price shock, and output gap – how does it shift the supply curve?</p>	<p>Case Analysis & Questions Problems and Exercises “Workshop” Activities & Case Studies How do changes in the quantity of money lead to proportional changes in the price level? You be the chairman! Where do you see our economy headed and what would you do? Analyze it, evaluate it, and predict – Report your findings!</p>
<p>Course: Money & Banking BUAD222</p> <p>Performance Indicators - LWDAT</p> <ul style="list-style-type: none"> Work collaboratively with area insurance agencies to learn about the insurance 	<p>Standard 1: Career Development: Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions. Standard 2: Integrated Learning: Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings. Standard 3a: Universal Foundation Skills: Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace. Standard 3b: Career Majors Students who choose a career major will acquire the career- specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.</p>	<ul style="list-style-type: none"> What is INVEST? What is insurance? How is insurance sold? 	<p>Classroom speakers on each topic at left - See attached schedule – classroom speakers from area insurance</p>	<p>Speaker day responsibilities for planning and introductions, closings and</p>
<p>Essential Questions</p> <p>What is INVEST and how will it help me in the future?</p>	<p>Essential Knowledge & Skills</p>	<p>Classroom Ideas</p>	<p>Assessment Ideas</p>	

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<p>Industry</p> <ul style="list-style-type: none"> Analyze the different aspects of insurance Comprehend and analyze the different types of insurance that will affect them in the next five years Create research and portfolio documents to use as a reference Create essays for a national scholarship contest Comprehend the differences in insurances for personal use Communicate with area insurance agencies clearly and professionally Explore job shadowing and business/career opportunities with area insurance agencies 		<ul style="list-style-type: none"> What is underwriting? How is insurance service provided? How are claims handled? What is found in an insurance policy? What is personal insurance? What is commercial insurance? What happens at an insurance agency day-to-day? – Company Tour How are premiums determined? What is life insurance? What is the purpose and function of an insurance trade association? Scholarship Writing – INVEST Job Shadowing 	<p>agencies – dates are tentative</p> <p>Do You Know? Auto Insurance Premiums and Auto Theft Home Burglary Emergency Phone Lists – INVEST Insurance Tips – Fact Finding</p> <p>Wall Street Journal Research – Classroom Edition provided by Dryden Mutual Insurance Company</p> <p>Dan MacNeil Agency Tour</p> <p>Internet Research of area agencies Job Shadowing</p>	<p>thanks</p> <p>Internet Research</p> <p>Rubrics for Insurance Tips</p> <p>INVEST Portfolio</p> <p>Scholarship Writing for INVEST national awards job Shadowing</p>
<p>*See attached speaker schedule and rubrics for examples of assignments and rubrics for</p>				

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Learning Standards for Career Development and Occupational Studies

Standard 1: Career Development

Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.

Standard 2: Integrated Learning

Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.

Standard 3a: Universal Foundation Skills

Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.

Standard 3b: Career Majors

Students who choose a career major will acquire the career-specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.

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MONEY & BANKING BUAD222

COURSE DESCRIPTION:

Money & Banking BUAD222 is a 1-unit specialized interdisciplinary business course related to the mathematics learning standards. This course is designed to prepare students for both college level business programs and to understand the complex financial world they will encounter during their lives. As outlined in Commissioner's Regulations 100.5(a)(7)(iv), for students who have successfully passed the required Math A Regents examination and upon local educational agency approval, a specialized course may be used to fulfill one of the three units of mathematics required for the Regents diploma.

CONTENT/CONCEPT	PS = Problem Solving RP = Reasoning & Proof CM = Communication	CN = Connections R = Representation	PS	RP	CM	CN	R
I. PAYROLL							
A. Terminology and Procedures			1 4	7		1,2 3,4	1 1
B. Compensation Plans: Salary, Hourly, Piecework, Commission, Overtime, Gross vs. Net Pay.							
C. Deductions Taxes, FICA, Fed Tax, State Tax, Voluntary Deduction, and Mandatory Deductions			3, 5, 7, 9	2, 11, 12 6, 11 2, 11, 12		3, 4 6, 7 6, 7	1-3 1 1
D. Benefits/Cost: Job Benefit Analysis							
E. Tax Preparation, Federal & State Tax Preparation			7, 9				
F. Health Insurance Cost Benefits Analysis							
II. INTEREST			2, 3	1, 7, 8, 10, 11	1-13	1 2, 6, 7 2, 6, 7 2, 3, 6, 7 2, 3, 6, 7 7, 3, 6, 7 3, 6, 7	1-5

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<p>F. Compounds – Daily, Monthly, Quarterly, Semiannually and Annual</p> <p>G. Calculate effective rate (APR)</p>		5, 6			
III. CREATING FORMULAS					
<p>A. Using calculators or software applications</p> <p>B. Basic Formula Creation and use with software applications</p> <p>C. Generate Tables and Graphs using software applications, i.e. Bar, Line, Pie, Picture, X-Y, Stock Trends, Scatter</p>		4			
IV. BUDGETING/DEPRECIATION					
<p>A. Budget Construction/Analysis</p> <p>B. Forecasting for needs and goals</p> <p>C. Methods of Depreciation</p> <p> 1. Straight Line Method</p> <p> 2. Double Declining Balance</p> <p> 3. Sum of the Years Digits</p> <p>D. Reasons for Depreciation</p> <p>E. Guidelines from IRS – Method Determination</p>	<p>5</p> <p>1</p> <p>1</p>	<p>1, 2, 6, 7</p> <p>3, 4, 5, 8, 9</p> <p>3, 4, 5, 8, 9</p>	<p>1, 2, 3-6</p> <p>1-13 1,</p> <p>2, 3-6</p> <p>1, 12</p> <p>1, 2, 7-9, 13</p>	<p>1, 2, 3, 6, 7</p> <p>1, 2, 3, 6, 7</p> <p>1, 2, 3, 6, 7</p> <p>1, 3, 6, 7</p>	<p>1-5</p> <p>1-5</p> <p>1-5</p>

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CONTENT/CONCEPT					
V. LOANS/BANKING A. Terminology and Procedures B. Electronic Banking and Software Applications C. Types of Checking Accounts D. Interpreting Account Records E. Mortgages, Rates, Term Calculations, Amortization, Cost F. Types of Mortgages – Variable, Fixed, Balloon, Private, FHA, Home Equity, VA, Sunny Mae and Fanny Mae G. Second Mortgage H. Students Loans/Financial Aid I. Owning vs. Renting Real Property J. Auto Purchasing vs. Auto Leasing K. Personal Loans	8, 10	1, 2	C through K 1-13 1, 10-13 1, 2, 13	1 1-4, 6, 7 1-4, 6, 7	1-3 1-5 4 1-5 1-5 1-5
VI. ANNUITIES A. Types of Annuities and Calculations 1. Ordinary Annuities (Mortgage Payment) 2. Forborne Annuity 3. Deferred Annuity (Tax Shelter Annuity) 4. Periodic Payment of an Annuity	4-10	1, 2, 5, 6, 8, 11	1-13	2-4, 6, 7	1-5
VII. CREDIT A. Checking Your Credit Rating B. Theft and Protecting your credit Online C. Factors Affecting Credit Ratings D. Interest on Credit Cards, Term, Fees, and Additional Charges E. Alternative to Credit Cards, Debt Cards, Prepaid Cards	4, 5, 8	1, 2, 7	2-13 1, 4, 5, 6, 7-13	6 1, 2, 6, 7 1, 2, 6, 7	7 7 1-5

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VIII. INVESTMENT A. Real Estate – Residential vs. Commercial B. Mutual Funds C. Stocks D. Common Stock E. Preferred Stock F. Bonds G. Retirement Planning – 401K, 403 B, IRA, Roth IRA H. Retirement and Estate Planning I. Tax Implications J. Dividends and Capital Gains K. Gains and Losses (ROI) L. Reading and Interpreting Market Quotations M. Treasury Bills N. Individuals Net Worth	1, 3, 5, 6, 8, 9	1, 2, 5, 7, 8, 12	1, 2, 3-6, 13	6, 7 1-3 1-3 1-3 1-3 1-3 1-3 1-3	1-5
IX. FINANCIAL STATEMENT ANALYSIS A. Financial Reports and Ratios B. Income Statement C. Balance Sheet D. Charts and Graphs Representing Data E. Probability F. Economic Statistics, CPI, Inflation Rate	3, 4, 8	1, 2, 7, 8 5, 9	1-13	1-4, 6, 7	1-5 7 7
X. US CURRENCY VS. FOREIGN CURRENCY	1, 3, 8, 9, 10	1, 2, 5, 7	1-13	1-4, 6, 7	1, 7
CONTENT/CONCEPT					

Resources: Text - Mathematics with Business Applications, Fifth Edition, Lange & Rousos, McGraw Hill/Glencoe Publishing, 2004. www.busmath.gelincocoe.com. Math & Financial Applications Collaborative Curriculum Development Project, January 2002 (see attached Crosswalk). The Mathematics Core Curriculum Crosswalk to Math & Financial Applications, August 2005 (See attached Activities). How Insurance Works, Smith & Wiering, AICPCU IIA, Pennsylvania, 2004.

Money & Banking Curriculum

A. International Money Conversions					
B. Global Investments					
C. Risk/Benefit Analysis of Foreign Investment					

The Mathematics Core Curriculum

Crosswalk to
Money & Banking BUAD222

Purpose:

This document shows the connections between Mathematics Core Curriculum as prescribed by the New York State Department of Education and the Money & Banking curriculum.

Intent:

It is the intent of this document to provide sufficient evidence that the Money & Banking BUAD222 course meets all of the Process Strands required by the New York State Department of Education while introducing specialized content in the study of financial mathematics.

Method:

The Mathematics Core Curriculum and the Money & Banking BUAD222 curriculum were used as the framework for this document and are both crossed referenced.

Commissioner's Regulation 100.5 (b)(7)(iv) Specialized

Courses

Students first entering grade nine in 2001 and thereafter shall meet the commencement level New York State learning standards by successfully completing twenty-two units of credit and five New York State assessments distributed as specified in (a) through (k) below. After passing the required New York State assessment or approved alternative in mathematics, science and English language arts, the remaining units of credit required in that discipline may be in specialized courses. A specialized course is a course that meets the requirements of a unit of credit as defined in section 100.1 (a) of this Part and the New York State commencement learning standards as established by the commissioner. A specialized course develops the subject in greater depth and/or breadth and/or may be interdisciplinary. Successful completion of one unit of study in the interdisciplinary specialized course may be awarded only one unit of credit but may be used to meet the distribution requirements in more than one subject.

Mathematics
Problem Solving Strand

Resources: Text - Mathematics with Business Applications, Fifth Edition, Lange & Rousos, McGraw Hill/Glencoe Publishing, 2004. www.busmath.glencoe.com. Math & 15Financial Applications Collaborative Curriculum Development Project, January 2002 (see attached Crosswalk). The Mathematics Core Curriculum Crosswalk to Math & Financial Applications, August 2005 (See attached Activities). How Insurance Works, Smith & Wiering, AICPCU IIA, Pennsylvania, 2004.

Money & Banking Curriculum

- P.S. 1 - 2: Build new mathematical knowledge through problem solving
- P.S. 3 - 4: Solve problems that arise in mathematics and in other contexts
- P.S. 5 - 7: Apply and adapt a variety of appropriate strategies to solve problems
- P.S. 8 - 10: Monitor and reflect on the process of mathematical problem solving

Money & Banking BUAD222 Activities

Students will:

- utilize spreadsheet and charting applications to solve problems
- develop and maintain a payroll register
- obtain the information necessary to properly compute payroll
- use a chart or graph to show trends in payroll
- calculate total fringe benefits and net job benefits
- analyze job benefits of selected job offerings calculate commissions (straight, graduated, etc...) develop spreadsheets to compute and monitor health insurance cost benefits determine maturity dates of notes and loans solve for all four elements of the simple interest formula compare and contrast a variety of compounding methods
- utilize a spreadsheet to create "what if" budget scenarios
- generate tables using a variety of depreciation methods
- develop and maintain a variety of banking/investment records
- compare and contrast different types of mortgage products
- analyze the financial impact of various mortgage options
- compare and contrast the cost/benefits of renting vs. owning real property
- develop a spreadsheet that projects long term impact of student loans
- calculate and determine the most cost efficient method of obtaining goods/services
- read and interpret stock market data to determine trends
- utilize financial data to determine investment opportunities
- collaborate to develop a savings and retirement plan for a variety of life stages
- utilize spreadsheets to develop and chart a variety of financial statements
- analyze financial statements and make modifications to a budget
- complete a ratio analysis of financial statements
- interpret and analyze current economic data and calculate projections
- perform a risk benefit analysis of foreign investments
- collaborate on developing a financial plan to eliminate consumer debt

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Money & Banking Curriculum

Mathematics

Reasoning and Proof Strand

RP 1: Recognize reasoning and proof as fundamental aspects of mathematics RP 2 - 4:

Make and investigate mathematical conjectures

RP 5 - 8: Develop and evaluate mathematical arguments and proofs

RP 9 - 12: Select and use various types of reasoning and methods of proof

Money & Banking BUAD222 Activities

Students will:

- predict federal and state tax liability given a variety of payroll scenarios
- predict tax liabilities from a variety of life events i.e. inheritance, marriage, additional dependents, loss of job
- forecast the costs and financial impact of a change in health care providers
- illustrate and explain the time value of money concept
- incorporate verification elements when utilizing spreadsheets and charts

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Money & Banking Curriculum

- critique charts and graphs to determine bias or misrepresentation use a variety of methods to calculate depreciation choose the appropriate depreciation method for business or personal tax advantages estimate the effect of a salary or wage change on a personal budget compare and contrast the true cost of a variety of mortgage options collaborate and defend the selection of a particular mortgage option
- project the capacity to finance post secondary education via loans, financial aid and savings
- construct an argument that will support or refute annuities as an investment option
- compare and contrast the different methods of calculating credit card interest, finance charges and fees
- investigate and evaluate the true costs of using credit
- develop, verify and defend a cost/benefit analysis of different investment options
- critique a financial advisor's recommendations for validity
- build charts and graphs from financial statements to assess the financial health of companies within the same industry
- analyze a variety of economic indicators to predict changes in CPI, GDP, GNP, etc..... use currency valuation conversions to project the purchasing power of the dollar vs. other currencies

Mathematics Communication

Strand

- CM 1 - 2: Organize and consolidate their mathematical thinking through communication
- CM 3 - 6: Communicate their mathematical thinking coherently and clearly to peers, teachers, and others
- CM 7 - 9: Analyze and evaluate the mathematical thinking and strategies of others
- CM 10 - 13: Use the language of mathematics to express mathematical ideas precisely

Money & Banking BUAD222 Activities

Students will:

- build and explain a payroll register
- construct and present to peers, teachers, and others a graphical representation of health insurance cost/benefits analysis
- listen to and critique a peer's presentation on federal and state tax preparation
- develop the appropriate mathematical process to determine compensation in a commission scenario
- explain the concept of compound interest and build a spreadsheet to demonstrate the power of compounding
- support the concept of saving early and the power of the time value of money

Resources: Text - Mathematics with Business Applications, Fifth Edition, Lange & Rousos, McGraw Hill/Glencoe Publishing, 2004. www.busmath.glencoe.com. Math & 18Financial Applications Collaborative Curriculum Development Project, January 2002 (see attached Crosswalk). The Mathematics Core Curriculum Crosswalk to Math & Financial Applications, August 2005 (See attached Activities). How Insurance Works, Smith & Wiering, AICPCU IIA, Pennsylvania, 2004.

Money & Banking Curriculum

- develop savings scenarios to be utilized by other students in computing interest
- demonstrate competency in calculating annual percentage rate (APR) and make a presentation illustrating the importance of APR in both borrowing and savings
 - select the appropriate financial formula and/or functions to solve financial problems
- use the appropriate spreadsheet application to forecast revenue and expenses
- provide the rationale for forecasting changes in revenues and expenses based on changes in economic conditions
 - evaluate a peer's presentation relating to depreciation methodology
- utilize the appropriate formatting options to accurately represent generated data
- demonstrate check register maintenance and complete a reconciliation process manually and electronically
- present an analysis of renting versus leasing a vehicle
 - critique peers presentations on student loans and financial aid options read and analyze advertisements pertaining to mortgage options make a presentation or the use of annuities in retirement planning illustrate how a credit rating is determined and provide a plan for protecting their credit rating present organized mathematical ideas illustrating the tax implications of 401k, 403B, IRA, Roth IRA...
- use changes in the elements of the balance sheet equation to illustrate the impact they have on net worth in a variety of scenarios
- communicate clearly their understanding of national trade deficit calculations and the impact on a variety of businesses and industries

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Money & Banking Curriculum

Mathematics Connections Strand

- CN 1 - 2: Recognize and use connections among mathematical ideas
CN 3- 5: Understand how mathematical ideas interconnect and build on one another to produce a coherent whole CN 6 - 8:
Recognize and apply mathematics in contexts outside of mathematics

Money & Banking BUAD222 Activities

Students will:

- build a payroll register that illustrates the impact of changes in FICA to both the employer and the employee
 - classify and compute payroll deductions and illustrate their impact on net pay
 - calculate and illustrate a variety of compound interest scenarios and the final impact on the principle
 - build a spreadsheet illustrating the manipulation of the time element in the interest formula to account for borrowing for days, months or years
 - analyze future value and present value functions for their similarities and differences
 - analyze the impact of actuarial tables on the premium rate for insurance
 - utilize amortization functions to build an amortization schedule for the purchase of a home or an automobile
 - compare a monthly billing cycle of credit card versus debit card use accounting for applicable fees and finance charges
 - interest income (savings and treasury bills) versus dividend income and the tax implication related to each
- prepare a comparison of

Mathematics Representation

Strand

- R1 - 3: Create and use representations to organize, record, and communicate mathematical ideas R4 - 5: Select, apply, and translate among mathematical representations to solve problems
R6 - 8: Use representations to model and interpret physical, social, and mathematical phenomena

Money & Banking BUAD222 Activities

Students will:

- use a chart or graph to show trends in payroll

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Money & Banking Curriculum

- develop spreadsheets to monitor health insurance cost benefit and build related graph
- analyze the financial impact of various mortgage options and graph the results
- students will calculate various depreciation scenarios and select the appropriate chart type to present results
- create a table representing checking account options available at various local banks (comparing interest rates and bank fees)
- create a graph that illustrates the increase in personal bankruptcy filings as the result of the misuse of credit
- research and analyze Federal Reserve data related to treasury bill interest rates and the expected outcomes of rate adjustments
- graphically illustrate the historical inflation rate of a foreign country and its impact on their economic development

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