

PROGRAMMING II

Students will:

- Write programs in C++ that contain functions and incorporate the various decision and looping statements learned in Programming I
- Write simple programs in C++ that allow inputting, processing, and outputting of array variables
- Write programs in C++ that contain functions that will receive arrays, use them to manipulate/calculate data, and return them
- Write programs in C++ that will search arrays for a specific value and keep track of the placement of that value within the array for future use
- Write programs in C++ that will sort arrays in either ascending or descending order
- Write programs in C++ that incorporate data in two-dimensional array format
- Write programs using various C++ mathematic functions such as pow(), sqrt(), etc.
- Write programs in C++ using recursion
- Write programs in C++ using the switch statement
- Write programs in C++ using enumerated data types
- Write programs in C++ using both simple struct data types and arrays of struct data types
- Write programs in C++ to input data from text files



STATISTICS

Students will:

- Explore the nature of data
- Discuss the uses and abuses of statistics and the design of experiments
- Describe, explore and compare data using summary statistics
- Develop a basic understanding of probability rules
- Recognize a discrete probability distribution including the binomial and Poisson distributions
- Use the TI-83/84 graphing calculator to explore the normal probability distribution
- Estimate a population mean and proportion with large and small samples
- Test a claim about the mean and proportion with large and small samples



WEB PAGE DESIGN

Students will:

- Create a simple web page using the <html>, <head>, <title>, and <body> HTML tags
- Incorporate <meta> HTML tags for a page's keywords, description, and character set
- Use the bgcolor, background, text, margin settings, and link color settings attributes within the <body> HTML tag
- Use a horizontal rule HTML tag to separate sections on a page
- Change the font face, color, and size various times within HTML tags on a page
- Use the heading HTML tags to also change the font within a page
- Use various text formatting HTML tags (underline, bold, etc.) within a page
- Use ordered and unordered list HTML tags as needed within a page
- Place various images on a page using the HTML tag using various attributes as needed
- Create internal and external links, both text and graphic, using the <a> HTML tag
- Create tables within a page using the <table>, <tr>, <th>, and <td> HTML tags, using the various attributes needed
- Create various pages using the <frame> HTML tag
- Create pages containing text boxes, radio buttons, check boxes, and selection lists
- Create pages using the Cascading Style Sheet method in inline, embedded, and linked style sheet formats
- Create pages using coding that incorporate CSS classes
- Validate web pages
- Upload pages for a web site on to the Internet



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ELECTIVES MATHEMATICS BUSINESS & COMPUTER TECHNOLOGY GRADES 9-12



PENTUCKET REGIONAL SCHOOL DISTRICT

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ACCOUNTING I

Students will:

- Define accounting terms
- Identify accounting concepts and practices related to a service business
- Explore career opportunities for people with accounting training
- Know the importance of communicating and making ethical decisions
- Apply the general acceptable accounting practices
- Understand the concepts of a service business and merchandise business
- Understand the accounting equation
- Analyze, journalize and post transactions
- Understand how business activities change the accounting equation
- Report financial information on a balance sheet
- Gain knowledge of checking accounts and bank statements
- Prepare a work sheet
- Record adjusting and closing entries
- Prepare general ledger after adjusting and closing entries are posted
- Prepare post-closing trial balance
- Record a payroll
- Prepare a 10-column work sheet for a merchandising business



ACCOUNTING II

Students will:

- Continue to define terms related to the field of accounting
- Identify accounting concepts and practices related to a departmentalized merchandising business organized as a corporation
- Identify accounting concepts and practices related to selected accounting control systems
- Identify accounting concepts and practices related to general accounting adjustments
- Identify accounting concepts and practices related to partnership, not-for-profit organization, management, cost and corporation accounting

COLLEGE ACCOUNTING

Students will:

- Define accounting terms
- Identify accounting concepts and practices related to a service business
- Explore career opportunities for people with accounting training
- Know the importance of communicating and making ethical decisions
- Apply the general acceptable accounting practices
- Understand the concepts of a service business and merchandise business
- Understand the changes that affect the accounting equation
- Analyze, journalize and post transactions
- Report financial information on a balance sheet
- Understand checking accounts and bank statements
- Understand dishonored checks, electronic funds transfers and petty cash
- Prepare a work sheet
- Prepare the financial statements at the end of a fiscal period (income statement and balance sheet)
- Record adjusting and closing entries
- Prepare general ledger after adjusting and closing entries are posted
- Prepare post-closing trial balance
- Prepare a payroll, payroll tax withholdings, payroll records, and payroll checks
- Record a payroll, employer payroll tax, and withholdings and payroll taxes
- Prepare a 10-column work sheet for a merchandising business

INTRODUCTION TO WORD PROCESSING

Students will:

- Through a multi-sensory teaching approach master the skill of touch-typing on the computer keyboard for speed, accuracy, and health through instruction in the proper method of keyboarding using drills, paper assessment and verbal feedback
- Create the various reports and learn about the expectations from the perspective of the academic setting as well as business
- Be introduced to concepts of plagiarizing, quotations and citations, footnotes and endnotes

INTRODUCTION TO WORD PROCESSING (continued)

Students will:

- Create various types of letters for personal and professional use, and learn about the expectations from the perspective of an academic setting as well as business
- Experience the techniques of using graphics, copying, pasting, cropping, and the use of the toolbar for incorporating graphics into documents
- Create the various memos and learn about the expectations from the perspective of a business or organization and the use of a communication tool such as a memo
- Create the various tables and learn about the different ways a table can be used for alignment, neatness, and organization as well as the different applications in academic, personal and business situations
- Use the various formatting methods of merging cells, centering, right align, as well as simple formulas for addition and sorting commands for organization

MICROSOFT APPLICATIONS

Students will:

- Understand the history, components and features of a computer and operating system
- Understand the features and details of a Word Processor
- Understand the characteristics of a spreadsheet and plan a spreadsheet using designated functions and demonstrate this skill
- Understand a database, define a field, design a database, view tables, create a form, create and use filters to query a database table and save a filter
- Create a report, create a report with a summary and create a calculation field
- Integrate applications by copying database entries to a Word document, copying database entries to an Excel spreadsheet and create an Access table from an Excel spreadsheet data
- Become knowledgeable about presentation software and create a new presentation based on a template, displays and slides
- Understand Desktop Publishing, create a publication, create text frames, manipulate frames, add graphics, backgrounds and foregrounds, create greeting cards, and insert text from a Word document



PROGRAMMING I

Students will:

- Learn the history of computers and the common terminology used
- Learn how to write, compile, and execute C++ programs
- Write simple programs in C++ using the cout statement along with various escape sequences
- Learn the different data types, how to name variables and constants, and the set up of a valid assignment statement
- Learn how to format output using the cout statement
- Determine where to include program documentation
- Write programs in C++ to output data into text files
- Write simple programs in C++ using a combination of cin, assignment, and cout statements.
- Learn the relational and logical operators and their rules
- Create compound statements
- Learn how to use the Watch and Trace options of a C++ compiler
- Write programs in C++ using statements of if, if-else, or if-else chain
- Write programs in C++ using the do-while, while, and for loop statements
- Write programs in C++ that will randomly choose integer data values
- Write programs in C++ incorporating the Boolean data type
- Write programs in C++ using the simple functions which do not receive or return data
- Write programs in C++ using functions which receive data but do not return data
- Write programs in C++ using functions which receive data and return just one data value
- Write programs in C++ using functions which receive data and return multiple data values
- Write programs in C++ using function overloading
- Write programs in C++ using default parameters
- Create library files that can be used in many C++ programs