# Table of Contents

Computer Information Systems, Advanced ................................................................. 1
Acknowledgments ........................................................................................................... 2
Course Description .......................................................................................................... 3
Task Elements Table ......................................................................................................... 3
Curriculum Framework .................................................................................................... 9
Using Advanced Word Processing Functions .............................................................. 9
Using Advanced Spreadsheet Functions ......................................................................... 15
Using Advanced Database Functions ............................................................................. 25
Enhancing Multimedia Presentations ............................................................................ 30
Producing Desktop Published Documents for Print and Electronic Distribution .......... 46
Designing and Producing Web Pages ........................................................................... 62
Maintaining, Managing, and Troubleshooting Systems ............................................... 68
Executing Networking Activities .................................................................................. 77
Implementing Programming Activities .......................................................................... 82
Exploring Legal and Ethical Issues ............................................................................... 92
Preparing for Industry Certification ............................................................................. 103
Developing Employability Skills ................................................................................ 105
SOL Correlation by Task .............................................................................................. 115
Teacher Resources ....................................................................................................... 123
Entrepreneurship Infusion Units .................................................................................. 126
Microsoft Imagine Academy Resources ...................................................................... 127
Appendix: Credentials, Course Sequences, and Career Cluster Information ............... 128
Acknowledgments

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Office of Career, Technical, and Adult Education
Virginia Department of Education
Course Description

Suggested Grade Level: 10 or 11 or 12  
Prerequisites: 6612 or 6614

Students apply problem-solving skills to real-life situations through advanced integrated software applications, including printed, electronic, and web publications. Students work individually and in groups to explore advanced computer maintenance activities, website development, programming, networking, emerging technology, and employability skills.

Students enhance computer information technology skills through the use of advanced integrated applications to create documents, publications, and websites including complex graphs, customized reports, and multimedia presentations. In addition to implementing programming and executing network activities, students also will practice the maintenance, management, and troubleshooting of systems; legal and ethical issues are explored; preparation is given for industry certifications; and employability skills are developed.

Task Elements Table

- Tasks/competencies designated by plus icons (⁺) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (₋) are omitted
- Tasks marked with an asterisk (*) are sensitive.

<table>
<thead>
<tr>
<th>Task Number</th>
<th>6613</th>
<th>6615</th>
<th>Tasks/Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Advanced Word Processing Functions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>✫</td>
<td>○</td>
<td>Compare advanced features of a word processing program to determine the best tools to use for a given task.</td>
</tr>
<tr>
<td>40</td>
<td>✫</td>
<td>✫</td>
<td>Create documents using advanced merge functions.</td>
</tr>
<tr>
<td>41</td>
<td>✫</td>
<td>✫</td>
<td>Produce documents incorporating tables, templates, autocorrect, styles, graphics, and other advanced features.</td>
</tr>
<tr>
<td>42</td>
<td>✫</td>
<td>✫</td>
<td>Create a professional document demonstrating established principles of design in desktop publishing.</td>
</tr>
<tr>
<td>43</td>
<td>✫</td>
<td>✫</td>
<td>Import text and graphics from other sources.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>44</td>
<td>✦</td>
<td>✦</td>
<td>Integrate software applications into a word processing document.</td>
</tr>
<tr>
<td>45</td>
<td>✦</td>
<td>✦</td>
<td>Create an online form with a word processing program.</td>
</tr>
</tbody>
</table>

**Using Advanced Spreadsheet Functions**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>✦</td>
<td>✦</td>
<td>Compare features and functions of spreadsheet programs to determine the best software for an individual’s or organization's needs.</td>
</tr>
<tr>
<td>47</td>
<td>✦</td>
<td>✦</td>
<td>Use advanced formulas and functions.</td>
</tr>
<tr>
<td>48</td>
<td>✦</td>
<td>✦</td>
<td>Use advanced tools.</td>
</tr>
<tr>
<td>49</td>
<td>✦</td>
<td>✦</td>
<td>Create complex graphs.</td>
</tr>
<tr>
<td>50</td>
<td>✦</td>
<td>✦</td>
<td>Analyze data.</td>
</tr>
<tr>
<td>51</td>
<td>✦</td>
<td>✦</td>
<td>Manipulate spreadsheet data.</td>
</tr>
<tr>
<td>52</td>
<td>✦</td>
<td>✦</td>
<td>Manipulate data to and from a spreadsheet.</td>
</tr>
<tr>
<td>53</td>
<td>✦</td>
<td>🌞</td>
<td>Create templates.</td>
</tr>
<tr>
<td>54</td>
<td>✦</td>
<td>🌞</td>
<td>Organize a large workbook with multiple worksheets.</td>
</tr>
<tr>
<td>55</td>
<td>✦</td>
<td>🌞</td>
<td>Apply linear programming to optimize spreadsheet results.</td>
</tr>
</tbody>
</table>

**Using Advanced Database Functions**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>✦</td>
<td>🌞</td>
<td>Evaluate the features of database programs to determine the best software for an individual’s or organization's needs.</td>
</tr>
<tr>
<td>57</td>
<td>✦</td>
<td>✦</td>
<td>Create a database file with advanced features.</td>
</tr>
<tr>
<td>58</td>
<td>✦</td>
<td>✦</td>
<td>Generate customized reports and forms, using advanced formatting features and graphics.</td>
</tr>
<tr>
<td>59</td>
<td>✦</td>
<td>✦</td>
<td>Utilize advanced queries to access information.</td>
</tr>
<tr>
<td>60</td>
<td>✦</td>
<td>✦</td>
<td>Manipulate data to and from a database.</td>
</tr>
</tbody>
</table>

**Enhancing Multimedia Presentations**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>✦</td>
<td>✦</td>
<td>Create a multimedia presentation with advanced features.</td>
</tr>
<tr>
<td>62</td>
<td>✦</td>
<td>✦</td>
<td>Enhance a multimedia presentation, using advanced features.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Utilize templates and master slides in the design of presentations.</strong></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>63</td>
<td></td>
<td></td>
<td><strong>Enhance a multimedia presentation layout, according to the principles of affective design.</strong></td>
</tr>
<tr>
<td>64</td>
<td></td>
<td></td>
<td>---</td>
</tr>
<tr>
<td>65</td>
<td></td>
<td></td>
<td><strong>Enhance a multimedia presentation with advanced features.</strong></td>
</tr>
<tr>
<td>66</td>
<td></td>
<td></td>
<td><strong>Integrate software applications into a multimedia presentation.</strong></td>
</tr>
<tr>
<td>67</td>
<td></td>
<td></td>
<td><strong>Create handouts and other visuals.</strong></td>
</tr>
<tr>
<td>68</td>
<td></td>
<td></td>
<td><strong>Deliver a multimedia presentation, according to the principles of effective communication.</strong></td>
</tr>
<tr>
<td>69</td>
<td></td>
<td></td>
<td><strong>Edit multimedia presentations.</strong></td>
</tr>
<tr>
<td>70</td>
<td></td>
<td></td>
<td><strong>Critique the clarity and effectiveness of advanced multimedia presentations.</strong></td>
</tr>
</tbody>
</table>

**Producing Desktop Published Documents for Print and Electronic Distribution**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th><strong>Create documents and graphics for use in advanced desktop publishing products.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>71</td>
<td></td>
<td></td>
<td><strong>Determine appropriate desktop publishing products based upon the purpose of the publication, intended audience, output format, and time and cost constraints.</strong></td>
</tr>
<tr>
<td>72</td>
<td></td>
<td></td>
<td>---</td>
</tr>
<tr>
<td>73</td>
<td></td>
<td></td>
<td><strong>Apply the principles of design, layout, and typography.</strong></td>
</tr>
<tr>
<td>74</td>
<td></td>
<td></td>
<td><strong>Design a layout for ease of readability and attractiveness.</strong></td>
</tr>
<tr>
<td>75</td>
<td></td>
<td></td>
<td><strong>Enhance the appearance of a document using desktop features.</strong></td>
</tr>
<tr>
<td>76</td>
<td></td>
<td></td>
<td><strong>Create templates or master pages.</strong></td>
</tr>
<tr>
<td>77</td>
<td></td>
<td></td>
<td><strong>Create multipage and multicolumn documents in a format appropriate for electronic distribution.</strong></td>
</tr>
<tr>
<td>78</td>
<td></td>
<td></td>
<td><strong>Demonstrate the use of keyboard shortcuts.</strong></td>
</tr>
<tr>
<td>79</td>
<td></td>
<td></td>
<td><strong>Incorporate original/imported text, graphics, tables, charts, and audio/visual elements from a variety of sources.</strong></td>
</tr>
<tr>
<td>80</td>
<td></td>
<td></td>
<td><strong>Convert a document to an alternate format.</strong></td>
</tr>
</tbody>
</table>

**Designing and Producing Web Pages**
| 81 |  | Evaluate the methods of web page creation. |
| 82 |  | Manipulate information for a website. |
| 83 |  | Compare the features and functions associated with the Internet, intranets, and extranets. |
| 84 |  | Create a website, applying design features. |
| 85 |  | Create hypertext links to other pages or sites. |
| 86 |  | Test a website for functionality. |
| 87 |  | Critique a website, according to accepted web design principles. |
| 88 |  | Develop a plan for maintaining a website. |
| 89 |  | Describe methods of publicizing and promoting a new website. |

Maintaining, Managing, and Troubleshooting Systems

| 90 |  | Evaluate workstations, equipment, software, and supplies for design, layout, and purchase. |
| 91 |  | Maintain workstations, equipment, software, and supplies. |
| 92 |  | Analyze software problems to obtain assistance through electronic documentation. |
| 93 |  | Troubleshoot hardware problems. |
| 94 |  | Explore tools to manage the operating system. |
| 95 |  | Explain how to install software and customize defaults. |
| 96 |  | Back up programs and data files. |
| 97 |  | Investigate advanced desktop configuration techniques. |
| 98 |  | Scan storage devices and equipment for malicious software. |
| 99 |  | Comply with safety and ergonomic precautions associated with computer use. |
| 100 |  | Compare operating systems. |
| 101 |  | Investigate security issues related to Internet technology. |
## Executing Networking Activities

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>102</td>
<td></td>
<td></td>
<td>Identify network types and topologies.</td>
</tr>
<tr>
<td>103</td>
<td></td>
<td></td>
<td>Identify components of a local area network.</td>
</tr>
<tr>
<td>104</td>
<td></td>
<td></td>
<td>Identify file structures on networks.</td>
</tr>
<tr>
<td>105</td>
<td></td>
<td></td>
<td>Explain the steps to download software/files to a specific workstation.</td>
</tr>
<tr>
<td>106</td>
<td></td>
<td></td>
<td>Identify basic network protocols.</td>
</tr>
<tr>
<td>107</td>
<td></td>
<td></td>
<td>Explain the importance of network security.</td>
</tr>
<tr>
<td>108</td>
<td></td>
<td></td>
<td>Troubleshoot network problems.</td>
</tr>
</tbody>
</table>

## Implementing Programming Activities

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>109</td>
<td></td>
<td></td>
<td>Debug a program.</td>
</tr>
<tr>
<td>110</td>
<td></td>
<td></td>
<td>Code an application program using functions.</td>
</tr>
<tr>
<td>111</td>
<td></td>
<td></td>
<td>Code an application program using embedded data.</td>
</tr>
<tr>
<td>112</td>
<td></td>
<td></td>
<td>Improve the appearance of printed reports.</td>
</tr>
<tr>
<td>113</td>
<td></td>
<td></td>
<td>Design interactive programs.</td>
</tr>
<tr>
<td>114</td>
<td></td>
<td></td>
<td>Write programs to summarize data.</td>
</tr>
<tr>
<td>115</td>
<td></td>
<td></td>
<td>Write programs to subtotal and group print.</td>
</tr>
<tr>
<td>116</td>
<td></td>
<td></td>
<td>Write modular programs.</td>
</tr>
<tr>
<td>117</td>
<td></td>
<td></td>
<td>Write programs using controlled loops.</td>
</tr>
<tr>
<td>118</td>
<td></td>
<td></td>
<td>Implement tables.</td>
</tr>
<tr>
<td>119</td>
<td></td>
<td></td>
<td>Code an application program using a sort routine.</td>
</tr>
<tr>
<td>120</td>
<td></td>
<td></td>
<td>Code an application program to display graphics.</td>
</tr>
<tr>
<td>121</td>
<td></td>
<td></td>
<td>Explore the characteristics and uses of artificial intelligence and machine learning.</td>
</tr>
</tbody>
</table>

## Exploring Legal and Ethical Issues
<table>
<thead>
<tr>
<th>122</th>
<th>✦</th>
<th>✗</th>
<th>Comply with copyright and patent laws.</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>✦</td>
<td>✗</td>
<td>Analyze situations where scanned/digitized audiovisual elements, documents, and electronic graphs may be used legally but are ethically questionable.</td>
</tr>
<tr>
<td>124</td>
<td>✦</td>
<td>✗</td>
<td>Comply with policies regarding acceptable use of technology.</td>
</tr>
<tr>
<td>125</td>
<td>✦</td>
<td>✗</td>
<td>Investigate computer crime and privacy issues related to Internet technology.</td>
</tr>
<tr>
<td>126</td>
<td>✦</td>
<td>✗</td>
<td>Apply concepts of security, integrity, courtesy, and confidentiality related to information and communication systems and intellectual property.</td>
</tr>
<tr>
<td>127</td>
<td>✦</td>
<td>✗</td>
<td>Investigate the design of websites for accessibility and accommodation of special needs (i.e., Americans with Disabilities Act, multilingual).</td>
</tr>
</tbody>
</table>

**Preparing for Industry Certification**

<table>
<thead>
<tr>
<th>128</th>
<th>✦</th>
<th>✗</th>
<th>Describe the processes and requirements for obtaining industry certifications related to the Computer Information Systems, Advanced, course.</th>
</tr>
</thead>
<tbody>
<tr>
<td>129</td>
<td>✦</td>
<td>✗</td>
<td>Identify testing skills/strategies for a certification examination.</td>
</tr>
<tr>
<td>130</td>
<td>✦</td>
<td>✗</td>
<td>Demonstrate the ability to complete selected practice examinations (e.g., practice questions similar to those on certification exams).</td>
</tr>
<tr>
<td>131</td>
<td>✗</td>
<td>✗</td>
<td>Complete an industry certification examination representative of skills learned in this course.</td>
</tr>
</tbody>
</table>

**Developing Employability Skills**

<table>
<thead>
<tr>
<th>132</th>
<th>✦</th>
<th>✗</th>
<th>Explore domestic and global job opportunities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>133</td>
<td>✦</td>
<td>✗</td>
<td>Update a résumé.</td>
</tr>
<tr>
<td>134</td>
<td>✦</td>
<td>✗</td>
<td>Update representative work samples to a professional portfolio, including a résumé format suitable for online posting.</td>
</tr>
<tr>
<td>135</td>
<td>✦</td>
<td>✗</td>
<td>Use electronic sources to research a company in preparation for a job interview.</td>
</tr>
<tr>
<td>136</td>
<td>✦</td>
<td>✗</td>
<td>Participate in a mock interview.</td>
</tr>
<tr>
<td>Task</td>
<td>Essential</td>
<td>Non-essential</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>137</td>
<td>+</td>
<td></td>
<td>Compose an interview follow-up communication.</td>
</tr>
<tr>
<td>138</td>
<td>+</td>
<td></td>
<td>Identify criteria for evaluating self-performance.</td>
</tr>
<tr>
<td>139</td>
<td>+</td>
<td></td>
<td>Prepare a letter of resignation.</td>
</tr>
<tr>
<td>140</td>
<td>+</td>
<td></td>
<td>Explore career and college options for lifelong learning.</td>
</tr>
<tr>
<td>141</td>
<td>+</td>
<td></td>
<td>Investigate new and emerging technological trends in the workplace.</td>
</tr>
<tr>
<td>142</td>
<td>+</td>
<td>+</td>
<td>Identify potential employment barriers for nontraditional groups and ways to overcome the barriers.</td>
</tr>
</tbody>
</table>

Legend: ✦ Essential  ○ Non-essential  — Omitted

---

**Curriculum Framework**

**Using Advanced Word Processing Functions**

---

**Task Number 39**

**Compare advanced features of a word processing program to determine the best tools to use for a given task.**

**Definition**

Comparison should include analyzing advanced features, functions, and characteristics of a software program used for writing, editing, formatting, and printing documents. The comparison should result in determining the word processing tools best suited for the given task.

**Common Career Technical Core**

**IT12**

Compare key functions and applications of software and determine maintenance strategies for computer systems.

**FBLA Competitive Events and Activities Areas**
Task Number 40

Create documents using advanced merge functions.

Definition

Creation should be completed by

- developing the data source (e.g., spreadsheet, database, table)
- developing the main document
- inserting merge fields into the main document
- merging data from the data source into the main document
- updating the data source and creating a new merged document

according to the steps specified by the word processing software.

FBLA Competitive Events and Activities Areas

Computer Applications

Computer Problem Solving
Task Number 41

Produce documents incorporating tables, templates, autocorrect, styles, graphics, and other advanced features.

Definition

Production should include using word processing features and functions, such as

- advanced editing functions
- automatic features (e.g., numbering, spell checker)
- fields
- hyperlinks
- tables, charts, graphics, drawing objects
- online grammar tools.

FBLA Competitive Events and Activities Areas

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Community Service Project

Computer Applications

Introduction to Business

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Publication Design

Spreadsheet Applications
Task Number 42

Create a professional document demonstrating established principles of design in desktop publishing.

Definition

Creation of a document (e.g., brochure, annual report, newsletter, catalog) could include

- overall format
- use of text boxes
- font selection
- white space
- graphics
- page layout
- online tools.

FBLA Competitive Events and Activities Areas

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Community Service Project

Computer Applications

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Partnership with Business Project

Publication Design

Spreadsheet Applications

Word Processing
Task Number 43

Import text and graphics from other sources.

Definition

Importing should follow established procedures to import, scale, crop, rotate, and text-wrap images. Graphics use should adhere to general copyright laws.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Business Communication
Business Financial Plan
Business Plan
Community Service Project
Computer Applications
Introduction to Business Communication
Local Chapter Annual Business Report (Hamden L. Forkner Award)
Partnership with Business Project
Publication Design
Spreadsheet Applications
Word Processing

Task Number 44

Integrate software applications into a word processing document.
Definition

Integration could involve linking a word-processed document to a database, graphic, or spreadsheet, so that when the source file (e.g., the database, graphic, or spreadsheet) is updated, the data in the word-processed document is updated as well. Examples could include integrating

- a database of addresses to be used to create a form letter or mailing labels
- a graphic to be used as an illustration
- a spreadsheet file with a graph to be used as supporting information.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Business Communication
Business Financial Plan
Business Plan
Community Service Project
Computer Applications
Introduction to Business
Local Chapter Annual Business Report (Hamden L. Forkner Award)
Publication Design
Spreadsheet Applications
Word Processing

---

Task Number 45

Create an online form with a word processing program.

Definition

Creation should include

- determining the form’s contents
• setting the form’s fields and parameters
• designing user data-entry options
• protecting the document from editing
• publishing the form.

FBLA Competitive Events and Activities Areas

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Community Service Project

Computer Applications

Database Design & Applications

Introduction to Business Communication

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Partnership with Business Project

Publication Design

Spreadsheet Applications

Word Processing

Using Advanced Spreadsheet Functions

Task Number 46
Compare features and functions of spreadsheet programs to determine the best software for an individual’s or organization's needs.

Definition

Comparison should include analyzing features, functions, and characteristics such as

- formulas and functions
- formatting and layout options
- chart features
- data analysis

in popular software programs used for creating, editing, formatting, and printing spreadsheets. The comparison should result in determining the spreadsheet tools best suited for the current task.

Common Career Technical Core

IT12
Compare key functions and applications of software and determine maintenance strategies for computer systems.

FBLA Competitive Events and Activities Areas

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Community Service Project

Computer Applications

Introduction to Business Communication

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Partnership with Business Project

Publication Design
Task Number 47

Use advanced formulas and functions.

Definition

Use may include

- PMT—calculates the payment for a loan based on constant payment and a constant interest rate
- PV—returns the present value of an investment
- VLOOKUP—looks up specified values in a table
- HLOOKUP—looks up specified data in table rows
- FV—returns the future value of an investment based on an interest rate and a constant payment schedule
- COUNT—counts the number of cells that meet the selected criteria
- COUNTIF—counts the number of cells in a range that meet the selected criteria
- IF/THEN—processes a logical test and delivers a value based on the result
- relative and absolute referencing and should be used to perform complex calculations in specialized areas (e.g., statistical, mathematical, financial).

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Spreadsheet Applications

Word Processing

Task Number 48

Use advanced tools.
Definition

Use includes manipulating and analyzing data in a spreadsheet and may include

- defining the task
- protecting data
- flagging for follow-up
- seeking goals
- creating scenarios
- auditing
- linking and embedding objects (OLE)
- creating macros
- creating add-ins
- customizing
- pivot tables and reports.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Spreadsheet Applications

Word Processing

Task Number 49

Create complex graphs.

Definition

Creation, along with reformatting, may include

- editing the data range
- editing the series
- combining chart/graph types
- changing chart types
- editing chart formatting options.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Task Number 50

Analyze data.

Definition

Analysis should include reviewing and comparing data in a spreadsheet and drawing conclusions about information such as financial reports.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Banking and Financial Systems
Business Communication
Business Financial Plan
Business Plan
Community Service Project

Computer Applications

Database Design & Applications

Introduction to Business Communication

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Partnership with Business Project

Publication Design

Spreadsheet Applications

Word Processing

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**Task Number 51**

**Manipulate spreadsheet data.**

**Definition**

Manipulation may include

- sorting–rearranging rows according to the contents of a selected column, either in ascending (e.g., A-Z, 1-50) or descending (e.g., Z-A, 50-1) order
- filtering–displaying only the rows that meet the criteria specified for a column.

**FBLA Competitive Events and Activities Areas**

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Computer Applications
Task Number 52

Manipulate data to and from a spreadsheet.

Definition

Manipulation includes

- importing—bringing in data, text, and/or graphics from sources outside the software application being used to interface with the spreadsheet
- exporting—sending data, text, and/or graphics to sources outside the software application.

These sources may include

- Internet
- scanner
- digital sources
- other files
- cloud-based storage
- paid data source.

FBLA Competitive Events and Activities Areas

American Enterprise Project

Business Communication

Business Financial Plan
Business Plan

Community Service Project

Computer Applications

Database Design & Applications

Introduction to Business Communication

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Publication Design

Spreadsheet Applications

Word Processing

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**Task Number 53**

**Create templates.**

**Definition**

Create documents using templates to enhance the document.

**FBLA Competitive Events and Activities Areas**

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Community Service Project

Computer Applications

Database Design & Applications
Task Number 54

Organize a large workbook with multiple worksheets.

Definition

Organization should include

- creating multiple worksheets
- renaming and moving worksheets
- creating links among multiple worksheets, including 3D reference from one worksheet to another
- using saving options or passwords to protect them.

FBLA Competitive Events and Activities Areas

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Community Service Project

Computer Applications

Database Design & Applications

Introduction to Business Communication
Task Number 55

Apply linear programming to optimize spreadsheet results.

Definition

Application should include using spreadsheet tools such as Solver to determine production, purchasing, or inventory optimization in the presence of multiple variables.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Business Communication
Business Financial Plan
Business Plan
Community Service Project
Computer Applications
Database Design & Applications
Introduction to Business Communication
Local Chapter Annual Business Report (Hamden L. Forkner Award)
Publication Design
Spreadsheet Applications
Using Advanced Database Functions

Task Number 56

Evaluate the features of database programs to determine the best software for an individual’s or organization's needs.

Definition

Evaluation should include

- discussing and comparing the features, functions, and characteristics of popular database software programs that allow the user to create records and files
- sorting and querying data for a variety of purposes.

Students should access and evaluate

- tables
- queries
- forms
- reports
- web integration
- SQL server integration.

The evaluation should result in determining the database features best suited for the current task.

Common Career Technical Core

IT12
Compare key functions and applications of software and determine maintenance strategies for computer systems.

FBLA Competitive Events and Activities Areas
Task Number 57

Create a database file with advanced features.

Definition

Creation could include features such as the

- type of data (e.g., text, numbers, dates)
- size of data elements
- manipulation of data
- data
- creation and configuration of forms, fields, queries, reports, and tables
- creation of fields that require calculation.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Task Number 58

Generate customized reports and forms, using advanced formatting features and graphics.

Definition

Generation involves

- creating a query to produce a formatted document, including enhancements using formatting features to modify elements such as
  - font
  - color
  - table borders
- using graphics such as visuals or photo files to illustrate a report.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Task Number 59

Utilize advanced queries to access information.

Definition

Utilization involves setting search parameters to help find specific data within a database. Methods for creating queries include using a query-building tool or a query-programming language (e.g., Structured Query Language [SQL]). Queries may be run automatically or manually through the database interface or a web page. Advanced queries may result in

- extracting multiple fields from the database
- displaying query results in a report
- displaying query results in a mail merge.

FBLA Competitive Events and Activities Areas

American Enterprise Project
Task Number 60

Manipulate data to and from a database.

Definition

Manipulation may include importing and/or exporting, bringing in and/or sending data, text, and/or graphics from and/or to sources outside the software application being used to interface with the database.

These sources may include

- Internet
- scanner
- digital source
- cloud-based storage
- other files
- paid data source.
Enhancing Multimedia Presentations

Task Number 61

Create a multimedia presentation with advanced features.

Definition

Creation includes gathering information to support the subject of the presentation, using sources such as books, periodicals, and the Internet.
Organization of the information includes determining the most logical and effective sequence of presentation.

**FBLA Competitive Events and Activities Areas**

**3D Animation**

**American Enterprise Project**

**Business Communication**

**Business Financial Plan**

**Business Plan**

**Coding and Programming**

**Community Service Project**

**Computer Applications**

**Computer Game & Simulation Programming**

**Digital Video Production**

**E-Business**

**Emerging Business Issues**

The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

**Graphic Design**

**Introduction to Business Communication**

**Introduction to Business Presentation**

**Local Chapter Annual Business Report (Hamden L. Forkner Award)**

**Mobile Application Development**

**Partnership with Business Project**

**Public Service Announcement**

**Publication Design**
Task Number 62

Enhance a multimedia presentation, using advanced features.

Definition

Enhancements may include, but are not limited to

- customizing original backgrounds
- working with master slides
- creating customized bullets
- using a storyboard
- inserting video/media files
- using object animations
- using the photo album feature
- using the comments feature to collaborate or provide feedback.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project
Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

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Task Number 63

Utilize templates and master slides in the design of presentations.

Definition
Utilization may include

- a title slide
- a bulleted list
- graphics and text
- a chart and text.

**FBLA Competitive Events and Activities Areas**

**3D Animation**

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

**E-Business**

**Emerging Business Issues**
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

**Graphic Design**

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 64

Enhance a multimedia presentation layout, according to the principles of affective design.

Definition

Enhancement may include

- achieving the purpose of the presentation in relation to the intended audience
- determining the type of output (e.g., on-screen slide show, LCD projector, website, tablet)
- considering time restraints and computer hardware availability
- determining the best design for a presentation that communicates the message
- providing a meaningful title and storyboard based on a focused message to be communicated
- keeping the layout simple, easy to read, and appropriate for the content
- choosing attractive colors, backgrounds, and themes that make the slide easy to read
- keeping the text concise
- choosing fonts and styles that are easy to read and emphasize important text
- using visuals, such as text images, charts, and graphs, to help communicate the message of the presentation
- determining additional advanced features that would enhance the presentation.

Common Career Technical Core

IT1
Demonstrate effective professional communication skills and practices that enable positive customer relationships.
FBLA Competitive Events and Activities Areas

3D Animation
American Enterprise Project
Business Communication
Business Financial Plan
Business Plan
Coding and Programming
Community Service Project
Computer Applications
Computer Game & Simulation Programming
Digital Video Production
E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign
Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Task Number 65

Enhance a multimedia presentation with advanced features.

Definition
Enhancements are made by using specialized features to increase the effectiveness of the presentation and should include consideration of the

- subject and audience when determining themes and visual effects (e.g., transitions between slides, animation of objects)
- readability of fonts, styles, and colors
- relevance of visuals and their value vs. the threat of distraction
- degree of support offered by charts and graphs in illustrating statistical data
- use of visual and audio elements.

Enhancement should be demonstrated by

- using visuals, a scanned picture, line art, or other artwork to insert graphics
- copying and pasting graphs and charts or using the Chart feature to create graphs and charts
- using the slide sorter view and slide transition dialog box to set the slide timings and transitions
- altering the color scheme and the background.

Common Career Technical Core

IT1
Demonstrate effective professional communication skills and practices that enable positive customer relationships.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project
Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing
Task Number 66

Integrate software applications into a multimedia presentation.

Definition

Integration should include using the

- multitasking feature by having the integrated applications on the window screen side-by-side
- command buttons on the toolbars or the drag-and-drop method to move or copy information.

Insertions of symbols, text boxes, movies and sound, pictures, and embedded objects (i.e., copy of a table, chart, or graphic) may be made using the Insert menu or tab.

Common Career Technical Core

IT1
Demonstrate effective professional communication skills and practices that enable positive customer relationships.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production
E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

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Task Number 67

Create handouts and other visuals.

Definition

Creation should be made by selecting the desired views of the presentation from the appropriate menu. Print handouts and other visuals (i.e., speaker’s notes and outlines) by making appropriate selections in the print dialogue box or similar menu.

Common Career Technical Core

IT1
Demonstrate effective professional communication skills and practices that enable positive customer relationships.

**FBLA Competitive Events and Activities Areas**

- 3D Animation
- American Enterprise Project
- Business Financial Plan
- Business Plan
- Community Service Project
- Computer Game & Simulation Programming
- Digital Video Production
- E-Business
- Electronic Career Portfolio
- Mobile Application Development
- Partnership with Business Project
- Public Service Announcement
- Sales Presentation

**Website Design**

The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

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**Task Number 68**

**Deliver a multimedia presentation, according to the principles of effective communication.**

**Definition**

Delivery should include
• incorporating appropriate written and oral skills
• maintaining clarity of content
• wearing professional attire
• maintaining good posture
• practicing effective elocution
• using presentation software and tools while continuing to engage the audience
• keeping presentation within the allotted amount of time.

Common Career Technical Core

IT1
Demonstrate effective professional communication skills and practices that enable positive customer relationships.

FBLA Competitive Events and Activities Areas

3D Animation
American Enterprise Project
Business Communication
Business Financial Plan
Business Plan
Coding and Programming
Community Service Project
Computer Applications
Computer Game & Simulation Programming
Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation
Task Number 69

Edit multimedia presentations.

Definition

Editing should include

- checking the format, mechanics, and clarity of message
- analyzing the document for effective presentation components.

Common Career Technical Core

IT1
Demonstrate effective professional communication skills and practices that enable positive customer relationships.

IT9
Describe quality assurance practices and methods employed in producing and providing quality IT products and services.

FBLA Competitive Events and Activities Areas

3D Animation
American Enterprise Project

Business Financial Plan

Business Plan

Community Service Project

Computer Game & Simulation Programming

Digital Video Production

E-Business

Electronic Career Portfolio

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Sales Presentation

Website Design

The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

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**Task Number 70**

**Critique the clarity and effectiveness of advanced multimedia presentations.**

**Definition**

Critique should be made in accordance with the components of effective presentations, including

- achieving the purpose of the presentation in relation to the intended audience
- determining the type of output medium
- considering time constraints and computer hardware availability
- determining the best design for a presentation that will communicate the message
- providing a meaningful title and storyboard based on a focused message to be communicated
- keeping the layout simple, easy to read, and appropriate for the content
- choosing attractive colors, backgrounds, and themes that make the slide easy to read
- keeping the text concise
- choosing fonts, styles, and colors that are easy to read and emphasize important text
- using visuals to help communicate the message of the presentation
- determining additional advanced features that would enhance the presentation and principles of effective communications, such as
  - incorporating appropriate written and oral skills
  - maintaining clarity of content
  - wearing professional attire
  - maintaining good posture
  - practicing effective elocution
  - using presentation software and tools while continuing to engage the audience
  - keeping presentation within the allotted amount of time.

**FBLA Competitive Events and Activities Areas**

**3D Animation**

**American Enterprise Project**

**Business Communication**

**Business Financial Plan**

**Business Plan**

**Coding and Programming**

**Community Service Project**

**Computer Applications**

**Computer Game & Simulation Programming**

**Digital Video Production**

**E-Business**

**Emerging Business Issues**
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

**Graphic Design**

**Introduction to Business Communication**
Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Producing Desktop Published Documents for Print and Electronic Distribution

Task Number 71

Create documents and graphics for use in advanced desktop publishing products.

Definition

Creation of products (e.g., flyers, brochures, and newsletters) should include

- preparing text in an exportable format
- selecting appropriate graphics or illustrations
- selecting appropriate font, font size, and font style and effects
- preparing a storyboard/mock-up, using prepared text and graphics.
FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

**Word Processing**

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**Task Number 72**

Determine appropriate desktop publishing products based upon the purpose of the publication, intended audience, output format, and time and cost constraints.

**Definition**

Determination should be made by

- comparing program costs vs. program features
- selecting appropriate desktop publishing software based on purpose, audience, output format, and time and cost constraints.

**Common Career Technical Core**

**IT12**

Compare key functions and applications of software and determine maintenance strategies for computer systems.

**FBLA Competitive Events and Activities Areas**

**3D Animation**

**American Enterprise Project**

**Business Communication**

**Business Financial Plan**

**Business Plan**

**Coding and Programming**

**Community Service Project**

**Computer Applications**
Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 73

Apply the principles of design, layout, and typography.

Definition

Application should be made by using appropriate

- font
font size
font style and effects
white space
column position and spacing
page margins
graphic text placements
image positioning within text wrapping in desktop published documents.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project
Task Number 74

Design a layout for ease of readability and attractiveness.

Definition

Design should include preparing a storyboard/mock-up that uses

- white space
- column position and spacing
- page margins
- the placement of graphics and text.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project
Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Task Number 75

Enhance the appearance of a document using desktop features.

Definition
Enhancement should be done by using

- graphic boxes
- illustrations
- lines
- visuals
- drop caps
- graphic text
- bullets.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development
Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

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Task Number 76

Create templates or master pages.

Definition

Creation should maintain consistent formatting within multipage documents or documents that will be reused on a consistent basis.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications
Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 77

Create multipage and multicolumn documents in a format appropriate for electronic distribution.

Definition
Creation should include following journalistic and formatting guidelines according to the instructor’s guidelines. Newspapers and magazines are examples of multipage, multicolumn documents.

**FBLA Competitive Events and Activities Areas**

3D Animation

American Enterprise Project

Business Communication

Business Ethics

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project
Task Number 78

Demonstrate the use of keyboard shortcuts.

Definition

Demonstration should include

- using keyboard shortcuts (i.e., for copy, paste, bold, italics, underline) from drop-down menus
- identifying and using function key combinations that provide shortcuts to keyboarding features.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Ethics

Business Financial Plan

Business Plan
Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Task Number 79
Incorporate original/imported text, graphics, tables, charts, and audio/visual elements from a variety of sources.

Definition

Incorporation could be completed by

- using copy/cut and paste to insert/import text, graphics, tables, and charts from other software applications
- dragging a file of one type (e.g., HyperText Markup Language [HTML]) from a file management interface and dropping it into a file of another type (e.g., word processing document, presentation)
- using and inserting various digital images
- saving sound as WAV files
- downloading royalty-free graphics and sound clips from the Internet
- inserting downloaded graphics and sound clips.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design
Introduction to Business Communication
Introduction to Business Presentation
Local Chapter Annual Business Report (Hamden L. Forkner Award)
Mobile Application Development
Partnership with Business Project
Public Service Announcement
Publication Design
Sales Presentation
Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Task Number 80

Convert a document to an alternate format.

Definition
Conversion should be performed using software to change a document format to alternate formats suitable for a variety of uses, storage, and retrieval (e.g., PDF files, XPS format, professional layout).

FBLA Competitive Events and Activities Areas

3D Animation
American Enterprise Project
Business Communication
Business Financial Plan
Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing
Designing and Producing Web Pages

Task Number 81

Evaluate the methods of web page creation.

Definition

Evaluation should be performed by

- identifying the integrated software packages, web design software, Internet browsers, and programming languages that may be used to create web pages
- reviewing the features of the programs, browsers, and languages
- identifying the purpose and target audience for a web page.

FBLA Competitive Events and Activities Areas

Business Ethics

E-Business

Mobile Application Development

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 82

Manipulate information for a website.

Definition

Manipulation should be done by

- choosing content—information to be provided on the website
- creating a folder and file structure to organize the site content
- documenting data when necessary
- determining the method with which users will search for content
• setting up the home page as an index
• maximizing the effects of design and format
• using appropriate graphics
• storyboarding pages.

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 83

Compare the features and functions associated with the Internet, intranets, and extranets.

Definition

Comparison should include

• defining and describing the Internet, intranets, and extranets
• examining the features and functions of each (e.g., design, linking, capabilities, unique benefits, user accessibility, security issues)
• exploring the business applications of each (e.g., communication, cloud computing, ecommerce).

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Network Design

Networking Concepts

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.
Task Number 84

Create a website, applying design features.

Definition

Creation could be performed by

- writing a mission statement that defines the goals of the site
- setting up a storyboard/mock-up site
- establishing a hierarchical navigation scheme
- using a programming language or a web page creation software program
- viewing pages using a web browser
- producing different effects on a storyboard/mock-up site, according to the instructor’s guidelines.

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Website Design

The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 85

Create hypertext links to other pages or sites.

Definition

Creation of hyperlinks between pages in the website and external links on the Internet (as appropriate) should make it easy for the user to navigate the pages and view related links. The location can be on the

- hard drive
- intranet
- Internet.

FBLA Competitive Events and Activities Areas
Task Number 86

Test a website for functionality.

Definition

Testing should be performed before publishing the page and should include

- proofreading and editing to achieve correct format, mechanics, and clarity
- checking links to internal pages, external pages, and sites
- checking the website offline by opening web pages in web browsers and multiple versions when possible.

Common Career Technical Core

IT9
Describe quality assurance practices and methods employed in producing and providing quality IT products and services.

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 87
Critique a website, according to accepted web design principles.

Definition

Critique could involve an investigation to analyze the design/technical elements used in professional websites. Web design guidelines to be used in the critique should include items such as:

- Does the site use an appropriate page format?
- Does the site have a consistent theme that is used on all web pages?
- Is there a theme that targets a specific audience?
- Does it contain navigation links in the same place on each web page?
- Is there a “Home” link on each page that returns the user to the main page?
- Are the visuals aesthetically appealing, and do they have a purpose?
- Is the text easy to read (i.e., does not include lengthy paragraphs or text without appropriate breaks or lists)?
- Are the colors used for the background, text, and on various elements appealing?
- Is there an appropriate amount of white space?
- Do all of the links work?
- Do graphics download quickly? Are thumbnail graphics used to reduce the time needed to download large files?
- Is meaningful information seen within 30 seconds?
- Does the site contain contact information, including an email address?
- Does the site contain errors in the text?
- Does the site contain blinking, scrolling, or animated images that are distracting and/or irritating to the viewer?
- Are Flash elements used effectively?
- Is the site compatible with all popular browsers?

Common Career Technical Core

IT9
Describe quality assurance practices and methods employed in producing and providing quality IT products and services.

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.
Task Number 88

Develop a plan for maintaining a website.

Definition

Development should include

- identifying a website host
- obtaining a domain name
- deciding how often the site should be updated, who will be providing information, and who will be maintaining the website
- communicating the plan for posting, updating, and maintaining a website that follows the guidelines and matches the needs of the individual or organization who owns the website.

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Task Number 89

Describe methods of publicizing and promoting a new website.

Definition

Description should present options including

- posting a hyperlink from another site (e.g., social media)
- registering as a member in a web ring
- registering with search engines
- using meta tags
- posting banner ads on other sites
- creating and sending announcements through an electronic mailing list
• participating in online discussions
• creating electronic newsletters
• publicizing using written notices of the site.

FBLA Competitive Events and Activities Areas

E-Business

Mobile Application Development

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Maintaining, Managing, and Troubleshooting Systems

Task Number 90

Evaluate workstations, equipment, software, and supplies for design, layout, and purchase.

Definition
Evaluation should analyze design features, usability, ergonomics, and affordability.

Common Career Technical Core

IT11
Demonstrate knowledge of the hardware components associated with information systems.

IT12
Compare key functions and applications of software and determine maintenance strategies for computer systems.

Economics and Personal Finance Standards of Learning

EPF.10
The student will develop consumer skills by

a. examining basic economic concepts and their relation to product prices and consumer spending;
b. examining the effect of supply and demand on wages and prices;
c. describing the steps in making a purchase decision, including the roles of marginal benefit and marginal cost;
d. determining the consequences of conspicuous consumption;
e. describing common types of contracts and the implications of each;
f. demonstrating comparison-shopping skills;
g. maintaining a filing system for personal financial records;
h. examining the impact of advertising and marketing on consumer demand and decision making in the global marketplace;
i. accessing reliable financial information from a variety of sources;
j. explaining consumer rights, responsibilities, remedies, and the importance of consumer vigilance; and
k. examining precautions for protecting identity and other personal information.

Task Number 91

Maintain workstations, equipment, software, and supplies.

Definition

Maintenance includes following established procedures for the

- start-up and shutdown of computers
- care of the computer equipment
- use of software, including opening and closing software
- use of supplies, storage of supplies, and disposal of waste and recyclable items
- installation of and upgrades to antivirus software.

Common Career Technical Core

IT-SUP2
Manage operating systems and software applications, including maintenance of upgrades, patches and service packs.

IT11
Demonstrate knowledge of the hardware components associated with information systems.

IT12
Compare key functions and applications of software and determine maintenance strategies for computer systems.
FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Spreadsheet Applications

Word Processing

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**Task Number 92**

**Analyze software problems to obtain assistance through electronic documentation.**

**Definition**

Analysis should determine the type of software problem and should require references, including

- the "Help" feature
- Internet search engines
- the software home page.

**Common Career Technical Core**

**IT-SUP3**

Apply appropriate troubleshooting techniques in resolving computer hardware, software and configuration problems.

**FBLA Competitive Events and Activities Areas**

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Spreadsheet Applications

Word Processing
Task Number 93

Troubleshoot hardware problems.

Definition

Troubleshooting involves the use of established, documented procedures to resolve hardware problems, including

- power supply
- proper connections
- paper jams
- network connections
- USB drive
- wireless devices.

Common Career Technical Core

**IT-SUP3**
Apply appropriate troubleshooting techniques in resolving computer hardware, software and configuration problems.

**IT11**
Demonstrate knowledge of the hardware components associated with information systems.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Network Design

Spreadsheet Applications

Word Processing

Task Number 94
Explore tools to manage the operating system.

Definition

Exploration includes system resource maintenance methods such as

- creating shortcuts/aliases to software
- deleting temporary files
- deleting the history of Internet browser
- deleting cookie files
- utilizing task manager
- managing the recycle bin.

Common Career Technical Core

IT-SUP7
Employ system installation and maintenance skills to setup and maintain an information system.

IT12
Compare key functions and applications of software and determine maintenance strategies for computer systems.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Spreadsheet Applications

Word Processing

Task Number 95

Explain how to install software and customize defaults.

Definition

Explanation should follow the software reference manual. Customization of defaults should require determining which defaults to change. Common default features that are customized include
Common Career Technical Core

IT-SUP7
Employ system installation and maintenance skills to setup and maintain an information system.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Networking Concepts

Spreadsheet Applications

Word Processing

Task Number 96

Back up programs and data files.

Definition

The back-up process includes creating a copy of files, directories, and software programs on a USB device or other storage device.

Common Career Technical Core

IT7
Perform standard computer backup and restore procedures to protect IT information.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications
Task Number 97

Investigate advanced desktop configuration techniques.

Definition

Investigation should include configuration management techniques such as

- Config.sys files
- Autoexec.bat files
- System.ini files.

FBLA Competitive Events and Activities Areas

Computer Problem Solving

Introduction to Business Procedures

Task Number 98

Scan storage devices and equipment for malicious software.

Definition

Scanning includes utilizing antivirus utility software that disinfects, if needed, and

- searches for malicious software
- removes malicious software from storage devices and equipment.

Common Career Technical Core

IT8
Recognize and analyze potential IT security threats to develop and maintain security requirements.

**FBLA Competitive Events and Activities Areas**

*Computer Applications*

*Database Design & Applications*

*Introduction to Business Procedures*

*Spreadsheet Applications*

*Word Processing*

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**Task Number 99**

**Comply with safety and ergonomic precautions associated with computer use.**

**Definition**

Compliance should include using computer-related items that ensure personal and equipment safety such as

- surge protectors and uninterruptible power supply (UPS)
- antistatic mats and pads
- antivirus protection software
- electric cords and wiring
- comfortably positioned furniture
- ergonomically designed keyboards.

**FBLA Competitive Events and Activities Areas**

*Computer Applications*

*Database Design & Applications*

*Introduction to Business Procedures*

*Spreadsheet Applications*
Task Number 100

Compare operating systems.

Definition

Comparison could include

- understanding the seven-layer open systems interconnection (OSI) model of computer communication
- testing use of each operating system
- researching each operating system
- interviewing users of various operating systems.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Networking Concepts

Spreadsheet Applications

Word Processing

Task Number 101

Investigate security issues related to Internet technology.

Definition

Investigation should include research to identify threats to computer systems (e.g., spam, malicious software, theft) and the methods for guarding against such threats, including

- firewalls
• a regular backup schedule
• password protection
• data encryption.

Common Career Technical Core

IT8
Recognize and analyze potential IT security threats to develop and maintain security requirements.

FBLA Competitive Events and Activities Areas

Computer Applications
Cyber Security
Database Design & Applications
Introduction to Business Procedures
Spreadsheet Applications
Word Processing

Executing Networking Activities

Task Number 102

Identify network types and topologies.

Definition

Identification should include a list of network types (e.g., local area network [LAN], wide area network [WAN], personal area network [PAN], peer-to-peer, server-based) and the components required to make each type of network operational. Characteristics that differ from one LAN to another include:

• Topology (e.g., bus, ring, star, mesh)
Task Number 103

Identify components of a local area network.

Definition

Identification may include

- server
- router
- network interface card (NIC).

Connections may be wireless or with cables and should be made according to guidelines established by the school's technical support department and/or in components manuals.
Task Number 104

Identify file structures on networks.

Definition

Identification should include a discussion of the methods of organizing files on a network using

- directories (folders)
- subdirectories
- multiple drive letters.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Network Design

Networking Concepts

Spreadsheet Applications

Word Processing

Task Number 105
Explain the steps to download software/files to a specific workstation.

Definition

Explanation of the steps should include following software manufacturer specifications.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Network Design

Networking Concepts

Spreadsheet Applications

Word Processing

Task Number 106

Identify basic network protocols.

Definition

Identification should include

- industry-standard protocols
  - transmission control protocol (TCP)/Internet protocol (IP)
  - Voice over IP (VoIP)
- the role each protocol plays in network operations
- the advantages and disadvantages of each protocol.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications
Task Number 107

Explain the importance of network security.

Definition

Explanation should involve clarifying well-documented usage policies to protect the network and network-accessible resources from unauthorized access. Network security features include

- firewalls
- filters
- encryption
- antivirus software.

Common Career Technical Core

IT8
Recognize and analyze potential IT security threats to develop and maintain security requirements.

FBLA Competitive Events and Activities Areas

Computer Applications

Cyber Security

Database Design & Applications

Introduction to Business Procedures

Network Design
Task Number 108

Troubleshoot network problems.

Definition

Troubleshooting should include

- understanding ways to troubleshoot network connectivity issues
- knowledge of established troubleshooting procedures
- gaining knowledge of network diagnostic tools.

FBLA Competitive Events and Activities Areas

Computer Applications

Database Design & Applications

Introduction to Business Procedures

Network Design

Networking Concepts

Spreadsheet Applications

Word Processing

Implementing Programming Activities
Task Number 109

Debug a program.

Definition

Debugging should include entering a program using a programming language to instruct a computer to perform a certain task.

Running a program ensures the program is executable and performs as expected. The program's reliability is tested by entering control group data (data for which the output is known) to find existing logic errors and potential problems others may encounter when using the program.

Debugging is the correction of any errors found during the testing phase.

FBLA Competitive Events and Activities Areas

Computer Applications

Cyber Security

Database Design & Applications

Introduction to Business Procedures

Network Design

Networking Concepts

Spreadsheet Applications

Word Processing

Task Number 110

Code an application program using functions.

Definition

Coding should have a variety of mathematical situations, to include operators for addition, subtraction, multiplication, division, or exponentiation. Parentheses may be used to ensure precedence in an equation. Function arguments must be placed in parentheses.
FBLA Competitive Events and Activities Areas

3D Animation

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Introduction to Business Procedures

Mobile Application Development

Network Design

Networking Concepts

Spreadsheet Applications

Word Processing

Task Number 111

Code an application program using embedded data.

Definition

Coding should follow procedures in reference materials regarding the application.

Embedded data is that which cannot be moved or changed in any way without changing the function of the program (i.e., calendar dates, clock times).

FBLA Competitive Events and Activities Areas

3D Animation

Coding and Programming

Computer Applications
Task Number 112

Improve the appearance of printed reports.

Definition

Improvement should include editing the code to ensure the correct syntax for formatting the report's contents (e.g., currency, decimal placement, tabs, alignment). Edit the appearance of printed reports by adding or changing

- fonts
- line spacing
- color
- graphics
- borders.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Plan
Coding and Programming

Community Service Project

Computer Applications

Graphic Design

Introduction to Business Communication

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Partnership with Business Project

Word Processing

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Task Number 113

Design interactive programs.

Definition

Design should include

- requesting information from the user
- processing the additional data
- making the revised data available to the user.

FBLA Competitive Events and Activities Areas

3D Animation

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Introduction to Business Procedures
Task Number 114

Write programs to summarize data.

Definition

Writing should include summarizing data by using mathematical functions and formulas. Examples of these programs include

- spreadsheet software
- tax-preparation software.

FBLA Competitive Events and Activities Areas

3D Animation

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Introduction to Business Procedures

Mobile Application Development

Network Design

Networking Concepts

Spreadsheet Applications
Task Number 115

Write programs to subtotal and group print.

Definition

Writing programs (i.e., database software) should include subtotal and group print by

- sorting the data
- combining like fields
- summarizing the data in the field
- printing.

FBLA Competitive Events and Activities Areas

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Mobile Application Development

Spreadsheet Applications

Word Processing

Task Number 116

Write modular programs.

Definition

Writing should entail
• writing reusable code in general procedures (i.e., Sub procedures or Sub functions)
• calling code from another procedure in the form module
• performing an action and returning a value, using Sub functions
• verifying the value returned has a data type.

FBLA Competitive Events and Activities Areas

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Mobile Application Development

Spreadsheet Applications

Word Processing

Task Number 117

Write programs using controlled loops.

Definition

Writing should include one of the following loops:

- "For"
- "While"
- "Do While"

FBLA Competitive Events and Activities Areas

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications
Task Number 118

Implement tables.

Definition

Implementation should include writing and executing a program that creates tables.

FBLA Competitive Events and Activities Areas

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Mobile Application Development

Spreadsheet Applications

Word Processing

Task Number 119

Code an application program using a sort routine.

Definition

Coding should include the sort: arranging the components of an array in ascending or descending order. The search should examine the first element in a list and proceed to examine the elements in the order in which they appear until a match is found.
Task Number 120

Code an application program to display graphics.

Definition

Coding should include a program that displays graphics, according to a programming language reference manual and the instructor’s guidelines.

FBLA Competitive Events and Activities Areas

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Mobile Application Development

Spreadsheet Applications

Word Processing
Task Number 121

Explore the characteristics and uses of artificial intelligence and machine learning.

Definition

Exploration should include conducting research on the artificial intelligence and machine learning topics by gathering current credible resources focused on the

- features and qualities
- benefits
- dangers.

FBLA Competitive Events and Activities Areas

Coding and Programming

Computer Applications

Computer Game & Simulation Programming

Database Design & Applications

Mobile Application Development

Spreadsheet Applications

Word Processing

Exploring Legal and Ethical Issues

Task Number 122

Comply with copyright and patent laws.
Definition

Compliance should include

- identifying copyright and patent laws as they pertain to
  - images
  - documents
  - audio
  - video
  - recordings
  - trademarks

to include any other elements adapted for use in desktop publishing, multimedia, and web documents

- discussing the consequences of illegal use
- discussing the different methods (i.e., direct contact with a company, copyright clearing houses) for obtaining permission to use copyrighted materials
- creating and maintaining documentation of all copyrighted materials used in class assignments.

Common Career Technical Core

BM2
Describe laws, rules and regulations as they apply to effective business operations.

IT4
Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Financial Plan

Business Law

Business Plan

Coding and Programming

Community Service Project
Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate
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Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate
with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Task Number 123

Analyze situations where scanned/digitized audiovisual elements, documents, and electronic graphs may be used legally but are ethically questionable.
Definition

Analysis should be made by

- examining the differences between legal and ethical questions
- examining the implications of using elements that have been altered enough to show a significant difference but still retain the flavor of the original work.

Common Career Technical Core

BM2
Describe laws, rules and regulations as they apply to effective business operations.

IT4
Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Ethics

Business Financial Plan

Business Law

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

**Graphic Design**

**Introduction to Business Communication**

**Introduction to Business Presentation**

**Local Chapter Annual Business Report (Hamden L. Forkner Award)**

**Mobile Application Development**

**Partnership with Business Project**

**Public Service Announcement**

**Publication Design**

**Sales Presentation**

**Social Media Campaign**

**Website Design**

The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

**Word Processing**

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**Task Number 124**

**Comply with policies regarding acceptable use of technology.**

**Definition**

Compliance should include evaluating the components of various acceptable use policies (e.g., school policies, company policies) and adhering to those policies.

**Common Career Technical Core**

**BM2**

Describe laws, rules and regulations as they apply to effective business operations.

**IT4**

Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.
FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Ethics

Business Financial Plan

Business Law

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design
Sales Presentation

Social Media Campaign

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Word Processing

Task Number 125

Investigate computer crime and privacy issues related to Internet technology.

Definition
Investigation should include research to identify computer crimes and privacy issues related to using the Internet, such as

- infection of a computer by malicious software
- computer hacking
- cyberstalking and cyberbullying
- theft of computer equipment
- software piracy
- identity theft
- password trafficking
- counterfeiting of currency.

Common Career Technical Core

BM2
Describe laws, rules and regulations as they apply to effective business operations.

IT4
Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.

FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project
Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project

Public Service Announcement

Publication Design

Sales Presentation
Task Number 126

Apply concepts of security, integrity, courtesy, and confidentiality related to information and communication systems and intellectual property.

Definition

Application should include examples such as

- cookies
- Global Unique Identifiers (GUIDs)
- smartphone/handheld computer privacy
- equipment theft
- hacking and viruses
- malicious software
- email spoofing
- plagiarism
- intellectual property, patents, and copyrights
- Fair Use and the Digital Millennium Copyright Act
- Internet censorship
- packet sniffing
- authentication, security keys, and encryption

and their use in denying or enhancing security, integrity, courtesy, and confidentiality in information and communication systems and intellectual property.

Common Career Technical Core

BM2
Describe laws, rules and regulations as they apply to effective business operations.

IT4
Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.
FBLA Competitive Events and Activities Areas

3D Animation

American Enterprise Project

Business Communication

Business Ethics

Business Financial Plan

Business Law

Business Plan

Coding and Programming

Community Service Project

Computer Applications

Computer Game & Simulation Programming

Cyber Security

Digital Video Production

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Graphic Design

Introduction to Business Communication

Introduction to Business Presentation

Introduction to Information Technology

Local Chapter Annual Business Report (Hamden L. Forkner Award)

Mobile Application Development

Partnership with Business Project
Task Number 127

Investigate the design of websites for accessibility and accommodation of special needs (i.e., Americans with Disabilities Act, multilingual).

Definition

Investigation should be conducted by reviewing Internet sites that provide

- web content accessibility guidelines based on the Americans with Disabilities Act (ADA)
- methods for accommodating multilingual users.

Common Career Technical Core

BM2
Describe laws, rules and regulations as they apply to effective business operations.

IT4
Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.

FBLA Competitive Events and Activities Areas

Business Ethics

E-Business

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Introduction to Business Procedures

Website Design
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Preparation for Industry Certification

Task Number 128

Describe the processes and requirements for obtaining industry certifications related to the Computer Information Systems, Advanced, course.

Definition

Description should include a list of industry certifications related to the Computer Information Systems, Advanced, course and the process/requirements for obtaining the certifications from

- official websites of the testing organization/vendor
- materials from publishers that have developed practice materials and tests based on information from the testing organization/vendor
- information from certified instructors or industry-certified professionals
- information in the “Introduction/Course Description” section of this course.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader

Job Interview

Task Number 129
Identify testing skills/strategies for a certification examination.

Definition

Identification should be undertaken by

- conducting an Internet research project
- reviewing materials from publishers
- interviewing certified instructors and/or industry-certified professionals.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader

Job Interview

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Task Number 130

Demonstrate the ability to complete selected practice examinations (e.g., practice questions similar to those on certification exams).

Definition

Demonstration should include obtaining and successfully completing practice examinations for selected certifications related to the course obtained from vendor sites and/or materials from publishers. The level of performance on a practice examination serves as a gauge of the applicant's readiness for formal industry testing.

Task Number 131

Complete an industry certification examination representative of skills learned in this course.

Definition
Completion will be achieved when the student applicant earns an examination score deemed "passing" by the testing organization. Qualifying examinations are those currently approved at the state level as representative of Computer Information Systems skills. Students should be encouraged to attain industry certification as evidence of their computer application skill level and general employability.

**Common Career Technical Core**

**BM3**
Explore, develop and apply strategies for ensuring a successful business career.

**FBLA Competitive Events and Activities Areas**

**Computer Applications**

**Database Design & Applications**

**Spreadsheet Applications**

**Word Processing**

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**Developing Employability Skills**

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**Task Number 132**

**Explore domestic and global job opportunities.**

**Definition**

Exploration should yield the careers available in the computer information systems field, and should include the preparation required for each, the opportunities for advancement, and the employment trends in the field.

The career search should include using job databases, the Internet, newspapers, and other sources and matching an individual’s abilities, aptitudes, and job expectations with industry standards. Fast-growing occupations and those with critical shortages of qualified applicants (e.g., network security, computer science, cyber security) should be researched.
Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader

Job Interview

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Task Number 133

Update a résumé.

Definition

Updating should include

- a job objective
- educational background
- work experience
- honors and awards
- extracurricular activities, such as membership in club and/or community activities, leadership positions held, and community service.

The student should understand the importance of keeping a résumé current and updated to reflect experience and education, even if the student is not currently involved in a job search.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader

Job Interview
Task Number 134

Update representative work samples to a professional portfolio, including a résumé format suitable for online posting.

Definition

Updating should include documents and/or programs produced in the course, a résumé, and a combination of electronic and non-electronic documents representative of the student’s qualifications. The portfolio should also describe any research being conducted, prototypes developed, or software designs being piloted or tested. Selected documents should reflect the student's knowledge, skills, and abilities.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader

Job Interview

Task Number 135

Use electronic sources to research a company in preparation for a job interview.
Definition

Use should include locating web resources on a company (i.e., news articles, annual reports, home sites) and information that may aid students in the interviewing technique.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader

Job Interview

L. Marguerite Crumley, Frank Manning Peele, Foundation's Sarah Lowe Thompson
Scholarships

Task Number 136

Participate in a mock interview.

Definition

Participation should provide students with the opportunity to practice interviewing skills before an actual interview. Students should play a variety of roles in the interview to illustrate behaviors both desirable (e.g., maintaining eye contact, asking informed questions, dressing professionally) and undesirable (e.g., speaking too softly, failing to answer questions completely, using electronic devices during the interview, wearing excessive jewelry or cologne/perfume).

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Electronic Career Portfolio

Future Business Leader
Task Number 137

Compose an interview follow-up communication.

Definition

Composition should include

- an appropriate business communication format
- an appreciation for the interview as a business courtesy
- stating the date and time the interview was conducted
- a reminder to the interviewer of the applicant’s qualifications
- a reiteration of an important point or topic discussed during the interview
- a confirmation of the applicant’s interest in the job
- a request for further action, such as a second interview or meeting.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Business Communication

Computer Applications

Electronic Career Portfolio

Future Business Leader

Introduction to Business Communication

Job Interview

L. Marguerite Crumley, Frank Manning Peele, Foundation's Sarah Lowe Thompson Scholarships
Task Number 138

Identify criteria for evaluating self-performance.

Definition

Identification may include rating specific aspects of job performance, including the following:

- the quality of work (as it relates to the requirements of the job)
- achievement of specific targets or goals
- administrative aspects of the job
  - budgeting
  - compliance with company procedures
  - submission of expense and/or other reports in a complete and timely manner
  - efficient use or resources
- personal development plan
- communication
  - interacting in a positive manner with customers, supervisors, and team members
  - listening to and positively reacting to constructive feedback from supervisors
- identification of aspects of the position’s expectations that could be cause for withdrawal from the application process.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Business Communication

Computer Applications

Electronic Career Portfolio

Future Business Leader

Introduction to Business Communication

Job Interview
Task Number 139

Prepare a letter of resignation.

Definition

Preparation should include

- a provision of ample time to find a replacement—usually two weeks
- an offer to train the replacement
- contact information for questions
- an expression of gratitude for the experience.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Business Communication

Computer Applications

Electronic Career Portfolio

Future Business Leader

Introduction to Business Communication

Job Interview

Word Processing
Task Number 140

Explore career and college options for lifelong learning.

Definition

Exploration should focus on continuing education through

- specialized information technology programs
- company and on-the-job training opportunities
- the community college system
- four-year colleges or universities
- online sources
- the military.

Students should understand that skills in information technology fields require lifelong learning and a willingness to continue education.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Business Communication

Electronic Career Portfolio

Future Business Leader

Introduction to Business Communication

Job Interview

L. Marguerite Crumley, Frank Manning Peele, Foundation's Sarah Lowe Thompson
Scholarships

Word Processing

Task Number 141
Investigate new and emerging technological trends in the workplace.

Definition

Investigation should result in a report based on cited research gathered from sources that may include

- newspaper articles
- trade magazines
- journals and periodicals
- Internet sources

that are reputable, credible, and appropriate, according to the instructor’s guidelines.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

IT6
Describe trends in emerging and evolving computer technologies and their influence on IT practices.

FBLA Competitive Events and Activities Areas

Business Communication

Computer Applications

Electronic Career Portfolio

Emerging Business Issues
The topic for this event changes from year to year. The annual topic may or may not correlate with this particular course. Please refer to the current Virginia FBLA State Handbook.

Future Business Leader

Introduction to Business Communication

Introduction to Information Technology

Job Interview

L. Marguerite Crumley, Frank Manning Peele, Foundation's Sarah Lowe Thompson Scholarships
Task Number 142

Identify potential employment barriers for nontraditional groups and ways to overcome the barriers.

Definition

Identification should include

- gender
- ethnicity
- age
- inadequate education
- a lack of required skills, including communication skills
- discrimination in hiring or promoting.

Ways to overcome the barriers should include

- scholarships
- job training programs
- mentorships
- minority assistance programs
- public speaking or communications courses.

Common Career Technical Core

BM3
Explore, develop and apply strategies for ensuring a successful business career.

FBLA Competitive Events and Activities Areas

Business Communication

Computer Applications

Electronic Career Portfolio

Future Business Leader

Introduction to Business Communication
## SOL Correlation by Task

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>English:</th>
<th>Mathematics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>Compare advanced features of a word processing program to determine the best tools to use for a given task.</td>
<td>10.5, 11.5, 12.5</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Create documents using advanced merge functions.</td>
<td>10.2, 11.2, 12.2</td>
<td>COM.7</td>
</tr>
<tr>
<td>41</td>
<td>Produce documents incorporating tables, templates, autocorrect, styles, graphics, and other advanced features.</td>
<td>10.2, 10.6, 10.7, 11.2, 11.6, 11.7, 12.2, 12.6, 12.7</td>
<td>COM.11, COM.12, COM.14</td>
</tr>
<tr>
<td>42</td>
<td>Create a professional document demonstrating established principles of design in desktop publishing.</td>
<td>10.2, 11.2, 12.2</td>
<td>COM.11, COM.12</td>
</tr>
<tr>
<td>43</td>
<td>Import text and graphics from other sources.</td>
<td>10.2, 11.2, 12.2</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Integrate software applications into a word processing document.</td>
<td>10.2, 11.2, 12.2</td>
<td>COM.11, COM.12</td>
</tr>
<tr>
<td>45</td>
<td>Create an online form with a word processing program.</td>
<td>10.2, 10.6, 10.7, 11.2, 11.6, 11.7, 12.2, 12.6, 12.7</td>
<td>COM.11</td>
</tr>
<tr>
<td>46</td>
<td>Compare features and functions of spreadsheet programs to determine the best software for an individual’s or organization's needs.</td>
<td>10.5, 11.5, 12.5</td>
<td>A.4, A.7, AFDA.1, AII.3, PS.1*, PS.2*, PS.4*</td>
</tr>
<tr>
<td>47</td>
<td>Use advanced formulas and functions.</td>
<td></td>
<td>A.4, A.7, AFDA.1, AII.3, AII.7, COM.7, COM.8, DM.12, DM.9*, MA.2</td>
</tr>
<tr>
<td>Page</td>
<td>Task Description</td>
<td>Subject Areas</td>
<td>Language Levels</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| 48   | Use advanced tools.                                                              | English: 10.2, 11.2, 12.2  
Mathematics: COM.1 |               |
| 49   | Create complex graphs.                                                           | English: 10.2, 11.2, 12.2  
History and Social Science: GOVT.1  
Mathematics: COM.1 |               |
| 50   | Analyze data.                                                                    | English: 10.5, 11.5, 12.5  
History and Social Science: GOVT.1  
Mathematics: COM.1, PS.1*, PS.2* |               |
| 51   | Manipulate spreadsheet data.                                                      | English: 10.2, 11.2, 12.2 |               |
| 52   | Manipulate data to and from a spreadsheet.                                       | English: 10.2, 11.2, 12.2  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14  
Mathematics: COM.10, COM.11 |               |
| 53   | Create templates.                                                                | English: 10.2, 10.6, 11.2, 11.6, 12.2, 12.6 |               |
| 54   | Organize a large workbook with multiple worksheets.                              | English: 10.2, 11.2, 12.2 |               |
| 55   | Apply linear programming to optimize spreadsheet results.                        | English: 10.2, 11.2, 12.2  
Mathematics: AFDA.5, DM.11 |               |
| 56   | Evaluate the features of database programs to determine the best software for an individual’s or organization's needs. | English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 |               |
| 57   | Create a database file with advanced features.                                   | English: 10.2, 11.2, 12.2  
Mathematics: COM.10 |               |
| 58   | Generate customized reports and forms, using advanced formatting features and graphics. | English: 10.2, 11.2, 12.2  
Mathematics: COM.11, COM.12 |               |
| 59   | Utilize advanced queries to access information.                                   | English: 10.2, 11.2, 12.2  
Mathematics: COM.9 |               |
<p>| 60   | Manipulate data to and from a database.                                           | English: 10.2, 11.2, 12.2 |               |</p>
<table>
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</thead>
</table>
|   | Create a multimedia presentation with advanced features. | History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14  
Mathematics: COM.10, COM.11  
English: 10.8, 11.8, 12.8 |
| 61 | Enhance a multimedia presentation, using advanced features. | History and Social Science: GOVT.1  
English: 10.6, 10.7, 10.8, 11.6, 11.7, 11.8, 12.6, 12.7, 12.8  
Mathematics: COM.12 |
| 62 | Utilize templates and master slides in the design of presentations. | English: 10.2, 11.2, 12.2 |
| 63 | Enhance a multimedia presentation layout, according to the principles of affective design. | English: 10.2, 11.2, 12.2 |
| 64 | Enhance a multimedia presentation with advanced features. | English: 10.1, 10.2, 11.1, 11.2, 12.1, 12.2 |
| 65 | Integrate software applications into a multimedia presentation. | English: 10.2, 11.2, 12.2  
Mathematics: COM.12 |
| 66 | Create handouts and other visuals. | English: 10.1, 10.2, 11.1, 11.2, 12.1, 12.2 |
| 67 | Deliver a multimedia presentation, according to the principles of effective communication. | English: 10.1, 11.1, 12.1 |
| 68 | Edit multimedia presentations. | English: 10.7, 11.7, 12.7 |
| 69 | Critique the clarity and effectiveness of advanced multimedia presentations. | English: 10.1, 10.2, 11.1, 11.2, 12.1, 12.2 |
| 70 | Create documents and graphics for use in advanced desktop publishing products. | English: 10.6, 10.7, 10.8, 11.6, 11.7, 11.8, 12.6, 12.7, 12.8  
Mathematics: COM.12 |
| 71 | Determine appropriate desktop publishing products based upon the purpose of the publication, intended audience, output format, and time and cost constraints. | English: 10.5, 11.5, 12.5 |
| 72 | Apply the principles of design, layout, and typography. | English: 10.2, 11.2, 12.2 |
| 73 | Design a layout for ease of readability and attractiveness. | English: 10.1, 11.1, 12.1  
Mathematics: COM.10 |
| 74 | Enhance the appearance of a document using desktop features. | English: 10.2, 11.2, 12.2 |
| 75 | Create templates or master pages. | English: 10.2, 11.2, 12.2 |
| 77 | Create multipage and multicolumn documents in a format appropriate for electronic distribution. | English: 10.6, 10.7, 11.6, 11.7, 12.6, 12.7  
Mathematics: COM.10, COM.11 |
| 78 | Demonstrate the use of keyboard shortcuts. |  |
| 79 | Incorporate original/imported text, graphics, tables, charts, and audio/visual elements from a variety of sources. | English: 10.2, 11.2, 12.2  
Mathematics: COM.10 |
| 80 | Convert a document to an alternate format. | English: 10.2, 11.2, 12.2 |
| 81 | Evaluate the methods of web page creation. | English: 10.5, 11.5, 12.5  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 82 | Manipulate information for a website. | English: 10.2, 11.2, 12.2  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 83 | Compare the features and functions associated with the Internet, intranets, and extranets. | English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 84 | Create a website, applying design features. | English: 10.1, 10.2, 10.6, 10.7, 11.1, 11.2, 11.6, 11.7, 12.1, 12.2, 12.6, 12.7  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14  
Mathematics: COM.2, COM.10, COM.11, COM.12 |
| 85 | Create hypertext links to other pages or sites. | English: 10.2, 11.2, 12.2  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 86 | Test a website for functionality. | English: 10.7, 11.7, 12.7  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 87 | Critique a website, according to accepted web design principles. | English: 10.5, 11.5, 12.5  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 88 | Develop a plan for maintaining a website. | English: 10.5, 11.5, 12.5  
History and Social Science: GOVT.12, VUS.12, WG.17 |
| 89 | Describe methods of publicizing and promoting a new website. | English: 10.1, 10.5, 11.1, 11.5, 12.1, 12.5  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 90 | Evaluate workstations, equipment, software, and supplies for design, layout, and purchase. | |
| 91 | Maintain workstations, equipment, software, and supplies. | English: 10.2, 11.2, 12.2 |
| 92 | Analyze software problems to obtain assistance through electronic documentation. | English: 10.2, 10.5, 11.2, 11.5, 12.2, 12.5 |
| 93 | Troubleshoot hardware problems. | English: 10.5, 11.5, 12.5 |
| 94 | Explore tools to manage the operating system. | English: 10.2, 11.2, 12.2 |
| 95 | Explain how to install software and customize defaults. | English: 10.5, 11.5, 12.5 |
| 96 | Back up programs and data files. | English: 10.2, 11.2, 12.2 |
| 97 | Investigate advanced desktop configuration techniques. | English: 10.2, 10.8, 11.2, 11.8, 12.2, 12.8 |
| 98 | Scan storage devices and equipment for malicious software. | English: 10.2, 11.2, 12.2 |
| 99 | Comply with safety and ergonomic precautions associated with computer use. | English: 10.5, 11.5, 12.5 |
| 100 | Compare operating systems. | English: 10.2, 10.5, 11.2, 11.5, 12.2, 12.5 |
| 101 | Investigate security issues related to Internet technology. | English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
| 102 | Identify network types and topologies. | English: 10.2, 10.5, 11.2, 11.5, 12.2, 12.5  
History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14 |
<table>
<thead>
<tr>
<th></th>
<th>Task Description</th>
<th>English:</th>
<th>History and Social Science:</th>
</tr>
</thead>
<tbody>
<tr>
<td>103</td>
<td>Identify components of a local area network.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>104</td>
<td>Identify file structures on networks.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>105</td>
<td>Explain the steps to download software/files to a specific workstation.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>106</td>
<td>Identify basic network protocols.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>107</td>
<td>Explain the importance of network security.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>108</td>
<td>Troubleshoot network problems.</td>
<td>10.2, 11.2, 12.2</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>109</td>
<td>Debug a program.</td>
<td>10.2, 11.2, 12.2</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>110</td>
<td>Code an application program using functions.</td>
<td>10.2, 11.2, 12.2</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>111</td>
<td>Code an application program using embedded data.</td>
<td>10.2, 11.2, 12.2</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>112</td>
<td>Improve the appearance of printed reports.</td>
<td>10.7, 11.7, 12.7</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>113</td>
<td>Design interactive programs.</td>
<td>10.2, 11.2, 12.2</td>
<td>GOVT.12, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td></td>
<td>Task</td>
<td>Subjects</td>
<td></td>
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<tr>
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<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>114</td>
<td>Write programs to summarize data.</td>
<td>English: 10.2, 11.2, 12.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics: COM.1, COM.3, COM.4, COM.7</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>Write programs to subtotal and group print.</td>
<td>English: 10.2, 11.2, 12.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics: COM.9, COM.11</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>Write modular programs.</td>
<td>English: 10.2, 11.2, 12.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics: COM.1, COM.2, COM.5</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>Write programs using controlled loops.</td>
<td>English: 10.2, 11.2, 12.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics: COM.13</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>Implement tables.</td>
<td>English: 10.2, 11.2, 12.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics: COM.10, COM.12</td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>Code an application program using a sort routine.</td>
<td>Mathematics: COM.9</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>Code an application program to display graphics.</td>
<td>English: 10.2, 10.5, 11.2, 11.5, 12.2, 12.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics: COM.10, COM.12</td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>Explore the characteristics and uses of artificial intelligence and machine learning.</td>
<td>English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>History and Social Science: GOVT.12, VUS.14, WG.17, WHII.14</td>
<td></td>
</tr>
<tr>
<td>122</td>
<td>Comply with copyright and patent laws.</td>
<td>English: 10.2, 10.5, 11.2, 11.5, 12.2, 12.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>History and Social Science: GOVT.1, GOVT.9, GOVT.15</td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>Analyze situations where scanned/digitized audiovisual elements, documents, and electronic graphs may be used legally but are ethically questionable.</td>
<td>English: 10.5, 11.5, 12.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>History and Social Science: GOVT.1, GOVT.9</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>Comply with policies regarding acceptable use of technology.</td>
<td>English: 10.5, 11.5, 12.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>History and Social Science: GOVT.1, GOVT.9</td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>Investigate computer crime and privacy issues related to Internet technology.</td>
<td>English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Objective</td>
<td>English:</td>
<td>History and Social Science:</td>
</tr>
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</tr>
<tr>
<td>126</td>
<td>Apply concepts of security, integrity, courtesy, and confidentiality related to information and communication systems and intellectual property.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.1, GOVT.9, GOVT.15, VUS.13, VUS.14, WG.17, WHII.14</td>
</tr>
<tr>
<td>127</td>
<td>Investigate the design of websites for accessibility and accommodation of special needs (i.e., Americans with Disabilities Act, multilingual).</td>
<td>10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
<td>GOVT.1, GOVT.16</td>
</tr>
<tr>
<td>128</td>
<td>Describe the processes and requirements for obtaining industry certifications related to the Computer Information Systems, Advanced, course.</td>
<td>10.5, 11.5, 12.5</td>
<td>GOVT.1, GOVT.9, GOVT.16, VUS.13</td>
</tr>
<tr>
<td>129</td>
<td>Identify testing skills/strategies for a certification examination.</td>
<td>10.5, 11.5, 12.5</td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>Demonstrate the ability to complete selected practice examinations (e.g., practice questions similar to those on certification exams).</td>
<td></td>
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</tr>
<tr>
<td>131</td>
<td>Complete an industry certification examination representative of skills learned in this course.</td>
<td>10.5, 11.5, 12.5</td>
<td></td>
</tr>
<tr>
<td>132</td>
<td>Explore domestic and global job opportunities.</td>
<td>10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
<td></td>
</tr>
<tr>
<td>133</td>
<td>Update a résumé.</td>
<td>10.6, 10.7, 11.6, 11.7, 12.6, 12.7</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>Update representative work samples to a professional portfolio, including a résumé format suitable for online posting.</td>
<td>10.6, 10.7, 11.6, 11.7, 12.6, 12.7</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>Use electronic sources to research a company in preparation for a job interview.</td>
<td>10.2, 10.8, 11.2, 11.8, 12.2, 12.8</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>Participate in a mock interview.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>Compose an interview follow-up communication.</td>
<td>10.6, 10.7, 11.6, 11.7, 12.6, 12.7</td>
<td></td>
</tr>
<tr>
<td>138</td>
<td>Identify criteria for evaluating self-performance.</td>
<td>10.5, 11.5, 12.5</td>
<td></td>
</tr>
<tr>
<td>139</td>
<td>Prepare a letter of resignation.</td>
<td>10.6, 10.7, 11.6, 11.7, 12.6, 12.7</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>Explore career and college options for lifelong learning.</td>
<td>10.8, 11.8, 12.8</td>
<td></td>
</tr>
<tr>
<td>141</td>
<td>Investigate new and emerging technological trends in the workplace.</td>
<td>10.8, 11.8, 12.8</td>
<td></td>
</tr>
</tbody>
</table>
Identify potential employment barriers for nontraditional groups and ways to overcome the barriers.

Teacher Resources

Instructional Scenarios

The following instructional scenarios provide classroom activities to support the major concepts included in Computer Information Systems and Computer Information Systems, Advanced.

- **Connecting with Those Who Came Before: Trace the Development of Computers and Devices and Their Influence on Society**
  Duty/Concept Area(s): 39-46/Exploring Computer Concepts

- **Creating a Letter Using Merged Fields from a Spreadsheet**
  Duty/Concept Area(s): 39-45/Using Advanced Word Processing Functions

- **To Expand or Not to Expand?**
  Duty/Concept Area(s): 45-56/Using Advanced Spreadsheet Functions

- **Database Project**
  Duty/Concept Area(s): 57-61/Using Advanced Database Functions

- **Getting Ready for the Workforce**
  Duty/Concept Area(s): 64-73/Producing Word Processing Documents

- **Producing Distribution Materials: Create Documents and Graphics for Use in Various Advanced Desktop Publishing Products**
  Duty/Concept Area(s): 74-85/Producing Desktop Published Documents for Print

- **Telecommunication Blog**
  Duty/Concept Area(s): 103-111/Communicating through Technology

Collaborative Lesson Ideas

All That Jargon

Subjects: Computer Applications, Technical Writing
**Objective:**

- Create a dictionary of technical vocabulary organized by subject area. Using the Internet as a research tool, students create a reference book that lists and explains the specialized vocabulary used in various occupational fields.

**Related Academic Standards of Learning**

- *English:* 9.9; 10.11

**This lesson plan came from**

Suffolk City Public Schools  
Lakeland High School, 757-925-5530  
Michele S. Mason, English teacher  
C. F. McCray, English teacher

**Let’s Get Technical**

**Subjects:** Business, English

**Objectives:**

- Write a technical report that compares two products in terms of quality and price.
- Design and produce a technical report appropriate for a particular audience.

**Real-world application:**

- Consumers have so many choices and hear so many conflicting messages about competing products that it is almost impossible to make an informed choice without assistance.
- Comparing the power, seating capacity, comfort, safety, and price of two similar models of automobile is a valuable service to consumers considering an expensive purchase.
- Presenting the information in a concise, easy-to-read format in nontechnical language appeals to consumers who lack time or the inclination to interpret more technical documents.

**Materials needed:**

- computer with software and supplies
- printer
- binding machine
- sample technical reports

**Activities:**
In English class, students select types of automobiles to compare.
Students examine sample reports comparing products.
Students conduct research and select the most effective way to present it.
In Business class, students format the report, produce pages and covers, and print and bind the publication.

Evaluation of student performance:

Report is rated according to a checklist that includes research, idea formulation and presentation, content, writing mechanics, editing, audience consideration, use of technology, and work ethic.

Related Academic Standards of Learning

- **English**: 12.4; 12.7; 12.8
- **Mathematics**: COM.1; COM.8

Mythology in Advertising

**Subjects**: English, World History, Keyboarding Applications, Business and Marketing

**Objectives**:

- Determine the purposes of myths (to entertain, to instruct, to explain).
- Evaluate advertising messages.

Students identify advertising messages that allude to Greek mythology. They create a modern myth or advertisement (using print or video) that incorporates characters from Greek mythology to entertain, instruct, or explain.

Related Academic Standards of Learning

**English**: 9.3; 9.4; 9.6

This lesson plan came from

Charlottesville City Public Schools
Charlottesville High School, 804-296-5131
America the Beautiful

Subjects: Business, Social Studies

Objective:

• Distribute geographical and historical information about states.

Students gather information about different states and compile it into a database showing a state map and facts such as state capital, flower, slogan, or products.

Suggestion: To strengthen real-world application, students could use the research to produce postcards or greeting cards featuring a particular state. Products could be donated to elementary and middle schools as geography aids.

Related Academic Standards of Learning

• Mathematics: COM.16: COM.17

This lesson plan came from

Suffolk City Public Schools
Lakeland High School, Suffolk, 804-925-5530
Marsha Martin, Business teacher
James Shafer, U.S. History teacher

Cyber Security and Cyber Forensics Infusion Units

Cyber Security and Cyber Forensics Infusion Units (CYBR) were designed to be infused with designated CTE courses to help students in those programs achieve additional, focused, validated tasks/competencies in personal and professional cyber security skills. These units are not mandatory, and, as such, the tasks/competencies are marked as "optional," to be taught at the instructor's discretion.

Entrepreneurship Infusion Units

Entrepreneurship Infusion Units may be used to help students achieve additional, focused competencies and enhance the validated tasks/competencies related to identifying and starting a
new business venture. Because the unit is a complement to certain designated courses and is not mandatory, all tasks/competencies are marked “optional.”

**Microsoft Imagine Academy Resources**

Microsoft Imagine Academy (MSIA) offers classroom resources and materials and instructional techniques that will help enhance instruction and learning for this course. Using the school’s membership ID and product key for the Microsoft Imagine Academy, all resources are available through the [MSIA Member Dashboard on the Microsoft site](#).

- To access the curriculum resources, select the Classroom Tile from the member site.
- To access downloadable curriculum resources including the MOAC e-Book, Lesson Plans, and Study Guides select Curriculum Overview - Curriculum Downloads.
- To access Online Learning videos and tutorials select Online Learning Directory tile.
- For more information visit: [How to Get Started with Microsoft Imagine Academy Program](#).
Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Administrative Assisting Assessment
- Administrative Services Assessment
- Cloud Essentials Certification Examination
- College and Work Readiness Assessment (CWRA+)
- College Level Examination Program (CLEP): Information Systems and Computer Applications
- General Management Assessment
- Human Resources Management Assessment
- IC3 Digital Literacy Certification Examination
- Interactive Media Assessment
- Microsoft 365 Fundamentals Examination
- Microsoft Certified Azure Fundamentals Examination
- Microsoft Dynamics 365 Fundamentals Examination
- Microsoft Office Specialist (MOS) Examinations
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.

- Accounting (6320/36 weeks)
- Accounting, Advanced (6321/36 weeks)
- Business Law (6131/36 weeks)
- Business Law (6132/18 weeks)
- Business Management (6135/36 weeks)
- Business Management (6136/18 weeks)
- Computer Information Systems (6612/36 weeks)
- Computer Information Systems (6614/18 weeks)
- Computer Network Software Operations (6650/36 weeks)
- Computer Network Software Operations, Advanced (6651/36 weeks)
- Cybersecurity Software Operations (6304/36 weeks)
- Database Design and Management (Oracle) (6660/36 weeks)
- Design, Multimedia, and Web Technologies (6632/18 weeks)
- Design, Multimedia, and Web Technologies (6630/36 weeks)
- Design, Multimedia, and Web Technologies, Advanced (6633/18 weeks)
- Design, Multimedia, and Web Technologies, Advanced (6631/36 weeks)
- Digital Applications (6611/36 weeks)
- Digital Applications (6617/18 weeks)
- Entrepreneurship (9093/36 weeks)
- Entrepreneurship, Advanced (9094/36 weeks)
- Information Technology Fundamentals (6670/36 weeks)
- International Baccalaureate Business Management (IB6135/36 weeks)
- International Baccalaureate Information Technology in a Global Society (IB6613/36 weeks)
- Java Programming (Oracle) (6661/36 weeks)
- Legal Administration (6736/18 weeks)
- Legal Administration (6735/36 weeks)
- Medical Administration (6731/18 weeks)
- Medical Administration (6730/36 weeks)
- Office Administration (6622/18 weeks)
- Office Administration (6621/36 weeks)
- Office Specialist I--Preparation (6740/36 weeks)
- Office Specialist II--Preparation (6741/36 weeks)
- Office Specialist III--Preparation (6742/36 weeks)
- Principles of Business and Marketing (6116/18 weeks)
- Principles of Business and Marketing (6115/36 weeks)
- Programming (6640/36 weeks)
- Programming, Advanced (6641/36 weeks)

### Career Cluster: Arts, Audio/Video Technology and Communications

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio and Video Technology and Film</td>
<td>Audio and Video Equipment Technician</td>
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<tr>
<td></td>
<td>Audio-Video Designer, Engineer</td>
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<tr>
<td>Journalism and Broadcasting</td>
<td>Art Director</td>
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<td></td>
<td>Broadcast Technician</td>
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<td></td>
<td>Editor</td>
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<td></td>
<td>Program Director</td>
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<td></td>
<td>Radio, TV Announcer</td>
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<td></td>
<td>Radio, TV Reporter</td>
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<tr>
<td>Performing Arts</td>
<td>Cinematographer</td>
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<td>Costume Designer</td>
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<td></td>
<td>Lighting Designer</td>
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<td></td>
<td>Technical Director</td>
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<tr>
<td></td>
<td>Video, Film Editor</td>
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<tr>
<td>Printing Technology</td>
<td>Desktop Publisher</td>
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<td></td>
<td>Job Printer</td>
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<td></td>
<td>Prepress Technician</td>
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<tr>
<td></td>
<td>Press Operator</td>
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<tr>
<td></td>
<td>Production, Planning, Expediting Clerk</td>
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<tr>
<td>Telecommunications</td>
<td>Computer Programmer</td>
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<tr>
<td></td>
<td>Network Systems and Data Communication Analyst</td>
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</tbody>
</table>

### Career Cluster: Business Management and Administration

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
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<tbody>
<tr>
<td>Administrative Support</td>
<td>Court Reporter</td>
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<td></td>
<td>Dispatcher</td>
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<td></td>
<td>Executive Assistant</td>
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<td></td>
<td>Medical Transcriptionist</td>
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<td></td>
<td>Office Manager</td>
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<td>Paralegal</td>
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</tbody>
</table>
## Career Cluster: Business Management and Administration

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
</table>
| **Business Information Management** | Administrative Assistant  
Entrepreneur  
General Manager  
Meeting and Convention Planner  
Office Manager  
Purchasing Manager |
| **General Management**       | Entrepreneur  
General Manager  
Meeting and Convention Planner  
Office Manager  
Purchasing Manager |
| **Operations Management**    | Administrative Services Manager  
Billing Manager  
General Manager  
Payroll Manager  
Purchasing Manager  
Shipping and Receiving Clerk |

## Career Cluster: Information Technology

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
</table>
| **Information Support and Services** | Account Executive  
Computer Support Specialist  
Customer Service Representative  
Instructional Coordinator  
Technical Writer |
| **Network Systems**         | Computer and Information Systems Administrator  
Computer Operator  
Computer Support Specialist  
Database Analyst  
Systems Analyst |

## Career Cluster: Marketing

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
</table>
| **Marketing Management**    | Advertising and Promotions Manager  
Art Director  
Brand Manager  
Chief Executive Officer  
Entrepreneur  
Franchisee  
General Manager  
Internet Entrepreneur  
Marketing Communication Manager  
Marketing Manager  
Media Planner, Buyer  
Multimedia Artist, Animator |
<table>
<thead>
<tr>
<th>Career Cluster: Marketing</th>
<th>Occupations</th>
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</thead>
<tbody>
<tr>
<td>Pathway</td>
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<tr>
<td></td>
<td>Public Information Director</td>
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<tr>
<td></td>
<td>Public Relations Manager</td>
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<tr>
<td></td>
<td>Retail Manager</td>
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<tr>
<td></td>
<td>Shipping and Receiving Clerk</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Career Cluster: Science, Technology, Engineering and Mathematics</th>
<th>Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathway</td>
<td></td>
</tr>
<tr>
<td>Engineering and Technology</td>
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<tr>
<td>Computer Hardware Engineer</td>
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<tr>
<td>Computer Programmer</td>
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<tr>
<td>Computer Software Engineer</td>
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<tr>
<td>Network and Computer Systems Administrator</td>
<td></td>
</tr>
<tr>
<td>Network Systems and Data Communication Analyst</td>
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</tr>
<tr>
<td>Production, Planning, Expediting Clerk</td>
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<tr>
<td>Project Manager</td>
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<tr>
<td>Stockroom, Warehouse, or Storage Yard Stock Clerk</td>
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<tr>
<td>Technical Writer</td>
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<tr>
<td>Telecommunications Specialist</td>
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<tr>
<td>Transportation Manager</td>
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<table>
<thead>
<tr>
<th>Career Cluster: Transportation, Distribution and Logistics</th>
<th>Occupations</th>
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<tbody>
<tr>
<td>Pathway</td>
<td></td>
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<tr>
<td>Health, Safety and Environmental Management</td>
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<tr>
<td>Health, Safety, and Environment Manager</td>
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<tr>
<td>Sales and Service</td>
<td>Billing Clerk</td>
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<td>Customer Service Representative (CSR)</td>
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<td></td>
<td>Dispatcher</td>
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<tr>
<td></td>
<td>Office Manager</td>
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<tr>
<td></td>
<td>Parts Salesperson</td>
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<tr>
<td></td>
<td>Statement Clerk</td>
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</table>