



## CTSO Course Alignments: Computer Applications

Below you will find standards for the Computer Applications course aligned with competitive events from appropriate career and technical student organizations (CTSOs). Knowing the aligned events for your organization will allow you to have additional tools for teaching course standards, as well as increase student engagement and preparation in your CTSO activities. The final column recommends potential tools from other CTSO organizations. Even if your students are not participating in these organizations, available rubrics, tools, and materials can also add to the instructional resources at your disposal for best teaching your content.

**Important to note:** While the aligned activities below can be important tools in teaching course standards, it is important to note that events may not cover a standard in its entirety and should not be the sole instructional strategy used to address a standard.

|   | STANDARD  | ALIGNED DECA & FBLA COMPETITIVE EVENTS/PROGRAMS                                | OTHER POTENTIAL CTSO TOOLS & RESOURCES  |
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| 1 | Research recent developments in information technology affecting the supply/demand characteristics of the job market, including career pathways and occupational outlooks for occupations in business and finance that require information technology expertise. Synthesize findings into a presentation highlighting the typical roles and responsibilities of professionals in high-growth occupations. (TN Reading 1, 2, 7, 9; TN Writing 4, 6, 7, 8, 9) | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Job Interview</li> </ul> | <ul style="list-style-type: none"> <li>• <b>FCCLA:</b> Job Interview, Career Investigation, Entrepreneurship</li> <li>• <b>HOSA:</b> Researched Persuasive Speaking, Prepared Speaking</li> <li>• <b>SkillsUSA:</b> Job Interview, Employment Application Process, Entrepreneurship</li> <li>• <b>TSA:</b> Prepared Presentation</li> </ul> |
| 2 | Identify, connect, and demonstrate the correct usage of elements of a typical home computer, including a monitor, keyboard, mouse, network cable, and USB devices (such as camera, memory, or scanner). Perform basic troubleshooting as needed for situations involving these components (e.g., if the computer does not recognize a device). (TN Reading 3, 4)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Help Desk</li> </ul>     |   |
| 3 | Correctly and safely execute basic file management operations on a typical personal computer and shared storage media, including the opening, creating, copying, moving, deleting, and renaming of files and folders, as well as searching for a specified file or folder on local or networked storage media. (TN Reading 3)   |  |   |

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| 4  | Describe and demonstrate the correct connections and setup for a new wireless router in a home computing environment. Discuss the impact of network speeds, wireless communication, firewalls, and gateways on individual and societal productivity. (TN Reading 3, 4)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Help Desk</li> </ul>                           |  |
| 5  | Describe the steps necessary to retrieve, download, and safely install new applications, updates, and plug-ins from the Internet. (TN Reading 3)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Help Desk</li> </ul>                           |  |
| 6  | Compare and contrast the accessibility of the Internet through a home router versus through a public Wi-Fi access point. Discuss the risks and advantages of using secure home networks versus publicly accessible networks. (TN Reading 1, 4, 8, 9)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Help Desk</li> </ul>                           | <ul style="list-style-type: none"> <li>• <b>HOSA:</b> Researched Persuasive Speaking, Extemporaneous Writing</li> <li>• <b>TSA:</b> Extemporaneous Presentation</li> </ul>   |
| 7  | While preparing materials and assignments in this course, use a browser to access and download Internet resources by uniform resource locator (URL), hyperlink, or favorite/bookmark.   |  |  |
| 8  | Use a word processing program to create and format documents with academic and business styles (e.g., memos, letters, agendas, reports, tabular lists) to communicate the results of research, meetings, lab reports, and relevant assignments in this course. (TN Reading 3, 7; TN Writing 2, 4, 6)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Word Processing</li> </ul>                     | <ul style="list-style-type: none"> <li>• <b>TSA:</b> Desktop Publishing</li> </ul>   |
| 9  | <p>Craft documents using word processing program features and methods such as:</p> <ol style="list-style-type: none"> <li>Paragraph formatting (line spacing, justification, indentations)</li> <li>Bulleted and numbered lists</li> <li>Tables of multiple columns, with and without borders</li> <li>Margins, headers, footers, page numbers, and footnotes</li> <li>Typeface fonts and weights, including hyperlinks</li> <li>Capitalization, punctuation, number expression, grammar</li> <li>Printing orientation, one- or two-sided, to a selected printer</li> <li>Bibliographies and tables of contents</li> <li>Saving to a file that can be shared and/or transported, including saving to cloud-based or external sources</li> </ol> <p>(TN Reading 3, 4, 7; TN Writing 2, 4, 6)</p> | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Word Processing, Desktop Publishing</li> </ul> | <ul style="list-style-type: none"> <li>• <b>FFA:</b> Agricultural Issues, Agricultural Communications, Cooperative Development Challenge, Marketing Plan</li> <li>• <b>HOSA:</b> Extemporaneous Writing</li> <li>• <b>TSA:</b> Desktop Publishing</li> </ul> |
| 10 | Enhance documents by including graphic arts components such as borders and shaded elements, graphs and charts from other programs, watermarks, and imagery imported from technology devices and drives as well as sources retrieved from the Internet, including adding citations and/or captions for each element when appropriate. (TN Reading 3, 7; TN Writing 4, 5, 6)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Word Processing, Desktop Publishing</li> </ul> | <ul style="list-style-type: none"> <li>• <b>TSA:</b> Desktop Publishing</li> </ul>   |

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| 11 | Create, format, and edit documents suitable for print or electronic distribution, both four-color and two-color (black and white). (TN Reading 3; TN Writing 4, 5, 6)  | <ul style="list-style-type: none"> <li>• <b>DECA:</b> Business Operations Research, Written Chapter Team, Marketing Representative, Business &amp; Entrepreneurship, Professional Selling events</li> <li>• <b>FBLA:</b> American Enterprise Project, Business Financial Plan, Business Plan, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project Service, Word Processing</li> </ul> | <ul style="list-style-type: none"> <li>• <b>TSA:</b> Desktop Publishing</li> </ul>  |
| 12 | Critique and edit existing documents with standard proofreading and editing marks to conform to a standard business style guide (e.g., fonts, colors, line spacing). Practice the use of electronic revision marks and comments, where supported. (TN Reading 1, 2, 5, 6, 8, 9; TN Writing 4, 5, 6)  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Word Processing, Desktop Publishing</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>FFA:</b> Agricultural Communications</li> </ul>   |
| 13 | Complete a comprehensive word-processing project with instructor approval that applies the skills acquired in this section. For example, prepare a contract, MLA-style report, business proposal, or budget report from a student organization. (TN Writing 4, 6, 7)   | <ul style="list-style-type: none"> <li>• <b>DECA:</b> Business Operations Research, Chapter Team, Business &amp; Entrepreneurship events</li> <li>• <b>FBLA:</b> Word Processing, Desktop Publishing</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>FFA:</b> Agricultural Issues, Agricultural Communications, Cooperative Development Challenge, Marketing Plan</li> <li>• <b>TSA:</b> Desktop Publishing</li> </ul> |
| 14 | Use a spreadsheet program to create and format academic and business documents for the purposes of tabulating and calculating numerical and/or textual data (e.g., statistics, historical data, measurements), such as budget calculations, sales reports, lab data, and related analyses. ( Reading 1, 3, 4, 5, 7, 9; TN Writing 4, 6; TN Math N-Q, S-ID)   | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Spreadsheet Applications</li> </ul>  |   |
| 15 | <p>Craft documents using a spreadsheet program using features and methods such as:</p> <ol style="list-style-type: none"> <li>a. Cells, columns, and rows</li> <li>b. Formulas and functions</li> <li>c. Copy, move, delete, and fill</li> <li>d. Cell-value formats (numerical and text) and alignment</li> <li>e. Column and row width/height, insert/delete, move</li> <li>f. Printing to a selected printer</li> <li>g. Saving with a file format that can be shared and/or transported</li> </ol> <p>(TN Reading 3, 4, 5; TN Writing 4, 6; TN Math N-Q, S-ID)</p> | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Spreadsheet Applications</li> </ul>  |   |

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| 16 | <p>Create new formulas to analyze data by calculating with, extracting from, presenting, and/or summarizing, including:</p> <ol style="list-style-type: none"> <li>Basic arithmetic calculations</li> <li>Basic mathematic (e.g., SUM, AVG, MIN, MAX) and text (e.g., LEN, LEFT, RIGHT, MID) functions</li> <li>Copying formulas that include both relative and absolute cell references</li> <li>Sorting in ascending/descending order</li> <li>Filtering data to retrieve specific values</li> <li>Basic conditional formatting (e.g., red for negative values)</li> </ol> <p>(TN Reading 3, 4, 5; TN Writing 6; TN Math N-Q, S-ID)</p> | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Spreadsheet Applications</li> </ul>           |  |
| 17 | <p>Create and format for optimal clarity a variety of types of graphs and charts, including bar charts, line charts, pie charts, and X-Y graphs, based on tabulated data. (TN Reading 3, 4, 7; Writing 4, 5, 6; TN Math N-Q, S-ID)</p>  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Spreadsheet Applications</li> </ul>           |  |
| 18 | <p>Retrieve a spreadsheet template (from those installed with the program or from the Internet) and customize it for a particular assignment approved by the instructor. For example, prepare a “timecard” of one’s daily hours spent on a month-long job assignment. (TN Writing 6)</p>  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Spreadsheet Applications</li> </ul>           |  |
| 19 | <p>Use a database program to interpret the structure of an existing database (found in teaching resources or teacher-created), identifying tables, fields, key fields, queries, forms, and reports. (TN Reading 1, 3, 4, 5, 7)</p>  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Database Design &amp; Applications</li> </ul> |  |
| 20 | <p>Using an existing database (found in teaching resources or teacher-created), create and run a database report based on basic queries. For example, retrieve the relevant information to answer a customer product inquiry during a mock customer service phone call. (TN Reading 3; TN Math N-Q, S-ID)</p>   | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Database Design &amp; Applications</li> </ul> |  |
| 21 | <p>Using an existing database (found in teaching resources or teacher-created), create, modify, and perform basic queries through a form to create a new table/view in a database. (TN Reading 3; TN Math N-Q, S-ID)</p>  | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Database Design &amp; Applications</li> </ul> |  |

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| <p><b>22</b></p> | <p>Design, create, and deliver an oral presentation for a selected audience on a topic approved by the instructor. Using a specified slide number and duration, include the following elements:</p> <ol style="list-style-type: none"> <li>A selected theme (colors, background, fonts, etc.)</li> <li>Bulleted text based on a chosen style</li> <li>Photographs and other imagery</li> <li>Charts and graphs</li> <li>Video and animated graphics</li> <li>Animated transitions of slides and components within a slide</li> </ol> <p>Save the file in a format that can be transported and shared with the audience.<br/>(TN Writing 4, 6, 7)</p> | <ul style="list-style-type: none"> <li>• <b>DECA:</b> Business Operations Research, Written Chapter Team, Marketing Representative, Business &amp; Entrepreneurship, Professional Selling events</li> <li>• <b>FBLA:</b> American Enterprise Project, Business Financial Plan, Business Plan, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project Service, Computer Game Simulation &amp; Programming, Desktop Application Programming, Digital Design &amp; Promotion, Digital Video Production, E-business, Mobile Application Development, Website Design, Business Presentation, Electronic Career Portfolio, Public Service Announcement, Sales Presentation, Social Media Campaign, 3D Animation</li> </ul> | <ul style="list-style-type: none"> <li>• <b>FFA:</b> Agricultural Issues, Agricultural Communications, Cooperative Development Challenge, Marketing Plan</li> <li>• <b>HOSA:</b> Prepared Speaking, Public Health, Community Awareness</li> <li>• <b>TSA:</b> Prepared Presentation</li> </ul> |
| <p><b>23</b></p> | <p>Design, create, and deliver a self-running electronic slideshow for a selected audience on a topic approved by the instructor. Using a specified slide number and duration, include the following elements:</p> <ol style="list-style-type: none"> <li>A selected theme (colors, background, fonts, etc.)</li> <li>Photographs and other imagery</li> <li>Video and animated graphics</li> <li>Animated transitions of slides</li> </ol> <p>Save the file in a format that can be transported and shared with the audience.<br/>(TN Writing 4, 6, 7)</p>  | <ul style="list-style-type: none"> <li>• <b>DECA:</b> Business Operations Research, Written Chapter Team, Marketing Representative, Business &amp; Entrepreneurship, Professional Selling events</li> <li>• <b>FBLA:</b> American Enterprise Project, Business Financial Plan, Business Plan, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project Service, Computer Game Simulation &amp; Programming, Desktop Application Programming, Digital Design &amp; Promotion, Digital Video Production, E-business, Mobile Application Development, Website Design, Business Presentation, Electronic Career Portfolio, Public Service Announcement, Sales Presentation, Social Media Campaign, 3D Animation</li> </ul> | <ul style="list-style-type: none"> <li>• <b>HOSA:</b> Health Education</li> </ul>  |

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| 24 | <p>Research, summarize, and deliver (via presentation, document, spreadsheet data/chart, or other format) a summary of the various perspectives and ramifications surrounding an ethical issue related to modern-day electronic communications, as approved by the instructor. Develop and strengthen claim(s) and counterclaim(s) about the issue, citing supportive evidence. Potential issues include spam, flaming, cyberbullying, libel, slandering, and mining of personal data for profit. (TN Reading 1, 2; TN Writing 1, 4, 6, 7)</p>                          | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Business Ethics</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>FCCLA:</b> Advocacy</li> <li>• <b>HOSA:</b> Researched Persuasive Speaking, Prepared Speaking, Biomedical Debate</li> <li>• <b>TSA:</b> Prepared Presentation, Debating Technological Issues</li> </ul> |
| 25 | <p>Research, summarize, and deliver (via presentation, document, spreadsheet data/chart, or other format) a summary of the various perspectives and ramifications surrounding an ethical issue related to intellectual property rights, as approved by the instructor. Develop and strengthen claim(s) and counterclaim(s) about the issue, citing supportive evidence. Potential issues include copyright infringement, piracy, plagiarism, art licensing, creative commons, and the state/federal laws that govern them. (TN Reading 1, 2; TN Writing 1, 4, 6, 7)</p> | <ul style="list-style-type: none"> <li>• <b>FBLA:</b> Business Ethics</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>FCCLA:</b> Advocacy</li> <li>• <b>HOSA:</b> Researched Persuasive Speaking, Prepared Speaking, Biomedical Debate</li> <li>• <b>TSA:</b> Prepared Presentation, Debating Technological Issues</li> </ul> |
| 26 | <p>Explain, furnish examples, and demonstrate technical literacy with the following terms:</p> <ol style="list-style-type: none"> <li>The Internet, World Wide Web, and various browsers</li> <li>Network speeds, wireless communication, firewalls, and gateways</li> <li>Domains, hyperlinks, homepages, favorites/bookmarks, plugins, tabs, and downloads/uploads</li> </ol>   |  | <ul style="list-style-type: none"> <li>• <b>TSA:</b> Website Design</li> </ul>  |
| 27 | <p>Employ skills covered in this course (document processing, spreadsheet applications, electronic presentations, databases, Internet fluency) to complete a cross curricular project approved by the instructor. (TN Writing 6, 7)</p>   | <ul style="list-style-type: none"> <li>• <b>DECA:</b> Business Operations Research, Written Chapter Team, Marketing Representative, Business &amp; Entrepreneurship, Professional Selling events</li> <li>• <b>FBLA:</b> American Enterprise Project, Business Financial Plan, Business Plan, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project Service, Computer Game Simulation &amp; Programming, Desktop Application Programming, Digital Design &amp; Promotion, Digital Video Production, E-business, Mobile Application Development, Website Design, Business Presentation, Electronic Career Portfolio, Public Service Announcement, Sales Presentation, Social Media Campaign, 3D Animation</li> </ul> | <ul style="list-style-type: none"> <li>• <b>FFA:</b> Agricultural Issues, Agricultural Communications, Cooperative Development Challenge, Marketing Plan</li> <li>• <b>TSA:</b> Website Design</li> </ul>   |

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| <b>ALL</b> | <b>CAN BE USED WITH ALL/MOST STANDARDS</b> | <ul style="list-style-type: none"><li>• <b>FBLA:</b> Computer Applications</li></ul> | <ul style="list-style-type: none"><li>• <b>FCCLA:</b> Illustrated Talk, Career Investigation, Chapter in Review Display, Chapter in Review Portfolio,</li><li>• <b>SkillsUSA:</b> Career Pathways Showcase, Job Skills Demonstration A, Job Skills Demonstration O, Prepared Speech, Extemporaneous Speaking, Chapter Display, Technical Computer Applications</li></ul> |
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