

Career Technical Education (CTE) Course Outline

Course Title:	Microcomputer Applications/2: Spreadsheet
Course Number:	75-35-84
Date:	July 2024
Industry Sector:	Business and Finance
Pathway:	Business Management
CBEDS Title:	Business Technology
CBEDS Code:	4623
Credits:	5

Hours:

Total
80

Course Description:

This competency-based course is the second in a sequence of courses designed for computer operation. It provides students with technical instruction and practical experience in the applications of computer programs. It includes introduction, safety and ergonomics, spreadsheet introduction, printing, editing and formatting a worksheet, formulas, charts, and employability skills and resume preparation. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

Prerequisites:	Enrollment requires successful completion of the Microcomputer Applications/1: Word Processing (75-35-82) course.
NOTE:	For Perkins purposes this course has been designated as a concentrator/capstone course. This course cannot be repeated once a student receives a Certificate of Completion.
A-G Approval	N/A
Methods of Instruction:	Lectures and discussion, demonstrations, student hands-on practice, individualized instruction, critical thinking and listening skills, and peer teaching and cooperative learning,
Student Evaluation:	Summative: End of section assessments
Industry Certification:	N/A
Recommended Texts:	Fehl, Alec, Scott, Alex; Linford, Ben; Ewell, Ian. <u>Building a Foundation with Microsoft Office 2021 & 365</u> . Labyrinth Learning, 2022. Freund, Steven M.; Hoisington, Corinne; Last, Mary Z.; Pratt, Philip J.; Sebok, Susan L.; Vermaat, Misty E. <u>Shelly Cashman Series Microsoft Office 365 & Office 2021: Introductory, 1st Edition</u> , Cengage Learning, 2021. Nielsen, Joyce J.; Weixel, Suzanne; Wempen, Faith. <u>Learning Microsoft Office 365 Level 1, 2022</u> , Pearson, 2022.
Link to Resource Folder	bit.ly/microcompapp2resources Access to Employer Advisory Board members, Employment Development Department, LAUSD Responsible Use Policy, and CDE Model Curriculum Standards for Business and Finance.

Approved by: Renny L. Neyra, Executive Director

<p>COMPETENCY AREAS AND STATEMENTS</p>	<p>MINIMAL COMPETENCIES</p>	<p>STANDARDS</p>
<p>A. INTRODUCTION REVIEW</p> <p>Identify skills required, equipment and materials used, classroom procedures, and available job opportunities.</p> <p>(2 hours)</p>	<ol style="list-style-type: none"> 1. Review the scope and purpose of the course. 2. Review classroom policies and procedures. 3. Review the importance of prioritizing work. 4. Review, identify, research, and compare the different career paths, occupations, employment outlook, career advancements, and its impact on the business and finance industry sector. 5. Review the opportunities available for promoting gender equity and the representation of non-traditional populations. 6. Review and recognize the importance of ethical behavior, responsibility, teamwork, respecting individual and cultural differences, and diversity in the workplace. 7. Review the duties and job roles as they apply to the Business and Finance industry sector. 	<p>Career Ready Practice: 1, 2, 3, 4, 7, 8, 9, 11</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.1, 2.3, 2.5 Career Planning & Management: 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 3.9 Technology: 4.1, 4.2, 4.3, 4.5, 4.6 Responsibility & Flexibility: 7.3, 7.4 Ethics & Legal Responsibilities: 8.4 Leadership & Teamwork: 9.3, 9.6</p> <p>CTE Pathway: A4.2, A7.1, A7.2, A7.3, A7.4</p>
<p>B. SAFETY AND ERGONOMICS REVIEW</p> <p>Review, understand, apply, and demonstrate</p>	<ol style="list-style-type: none"> 1. Review and explain classroom and workplace first aid and emergency procedures. 2. Review, and research the California Occupational Safety and Health Administration (Cal/OSHA) workplace requirements to make informed decisions. 	<p>Career Ready Practice: 1, 2, 4, 5, 6, 7, 8, 10, 11</p> <p>CTE Anchor: Academics:</p>

<p>the principles of safety and ergonomics.</p> <p>(4 hours)</p>	<ol style="list-style-type: none"> 3. Review how each of the following ensures a safe workplace to include verbal and nonverbal communication: <ol style="list-style-type: none"> a. employees' rights as they apply to job safety b. employees' obligations as they apply to safety c. safety laws applying to tools and equipment 4. Review and demonstrate operating a computer safely and in a manner that protects the equipment. 5. Review ergonomics and demonstrate sound ergonomic practices such as: <ol style="list-style-type: none"> a. identify causes, effects, and preventive measures for repetitive strain injuries b. typing technique, posture, and finger placement c. keyboard and monitor angle d. ways to hold and move a mouse without gripping it hard or squeezing it e. list benefits of periodic breaks to stretch and relax f. variety of stretches involving the wrists, neck, and shoulders g. organize and sanitize one's workspace 6. Review personal safety when lifting, bending, or moving equipment and supplies. 7. Review, discuss, and interpret software copyright laws as they pertain to computers. 8. Review and sign the LAUSD Responsible Use Policy (RUP). 9. Pass the safety test with 100% accuracy. 	<p>1.0</p> <p>Communications: 2.1, 2.3, 2.5, 2.6</p> <p>Technology: 4.2</p> <p>Problem Solving & Critical Thinking: 5.2, 5.4</p> <p>Health & Safety: 6.2, 6.3, 6.4, 6.5, 6.6, 6.7</p> <p>Ethics & Legal Responsibilities: 8.2, 8.3, 8.6, 8.7</p> <p>Technical Knowledge & Skills: 10.1, 10.2</p> <p>Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
<p>C. SPREADSHEET INTRODUCTION</p> <p>Understand and apply basic functions to create spreadsheets.</p>	<ol style="list-style-type: none"> 1. Define spreadsheets and: <ol style="list-style-type: none"> a. identify spreadsheet software available today b. describe spreadsheets used at home and in business c. define basic spreadsheet terminology d. list capabilities of spreadsheets e. demonstrate the ability to navigate the spreadsheet window 2. Demonstrate starting the spreadsheet program to open a blank workbook. 3. Explain the blank workbook and elements of the window by defining: <ol style="list-style-type: none"> a. rows b. columns c. cell 	<p>Career Ready Practice: 1, 2, 4, 10</p> <p>CTE Anchor: Academics: 1.0</p> <p>Communications: 2.1, 2.3, 2.4</p> <p>Technology: 4.2, 4.3</p>

<p>(10 hours)</p>	<ul style="list-style-type: none"> d. active cell e. cell location f. formula bar g. insert function (fx) h. range i. scroll bars j. status bar (views, zoom, page numbers, words) k. tabs l. ruler m. row headings n. column headings o. title bar (document name, minimize, maximize, close) p. select all <p>4. Explain and demonstrate the use of the elements to a spreadsheet:</p> <ul style="list-style-type: none"> a. workbook and worksheets b. The Ribbon c. Ribbon Display Options d. Quick Access Toolbar e. tabs f. Mini toolbar g. undo and redo h. clipboard i. Help j. switch between worksheets/adding worksheets k. using the cursor or function keys to choose various commands l. split window m. link(s) (hyperlink) <p>5. Explain and enter labels (text) and values (numbers).</p> <p>6. Review and demonstrate save vs. save as.</p> <p>7. Save a spreadsheet using the correct file name to data storage media.</p> <p>8. Demonstrate how to close a spreadsheet.</p> <p>9. Retrieve information from data storage media.</p> <p>10. Pass a spreadsheet introduction assessment with an 80% score or higher.</p>	<p>Technical Knowledge & Skills:</p> <p>10.1 Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2</p>
<p>D. PRINTING A WORKSHEET</p> <p>Understand and apply basic printing and page setup options.</p>	<p>1. Define the following terms:</p> <ul style="list-style-type: none"> a. portrait b. landscape c. gridlines d. scaling e. print area f. sheet options 	<p>Career Ready Practice: 1, 2, 4, 10</p> <p>CTE Anchor: Academics:</p>

<p>(5 hours)</p>	<ol style="list-style-type: none"> 2. Identify and practice the following elements of printing: <ol style="list-style-type: none"> a. copies b. preview and print a worksheet c. preview and print in both portrait and landscape d. page setup print options <ol style="list-style-type: none"> i. with/without gridlines ii. print area iii. sheet options (active sheets, entire workbook, print selection) iv. print one sided and both sides v. change margins in print mode vi. scaling 3. Pass printing a worksheet assessment with an 80% score or higher. 	<p>1.0 Communications: 2.1, 2.3 Technology: 4.2 Technical Knowledge & Skills: 10.1 Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
<p>E. EDITING A WORKSHEET</p> <p>Understand and apply basic editing tools of a spreadsheet.</p>	<ol style="list-style-type: none"> 1. Explain and demonstrate the following spreadsheet editing tools: <ol style="list-style-type: none"> a. open existing worksheet b. edit data on a worksheet and formula bar c. wrap and align text d. insert, delete, move, copy, and rename worksheets in a workbook e. cut, copy, and paste data f. undo and redo g. proofing (spelling, thesaurus, workbook statistics) h. hide/unhide columns and rows i. merge/split cells j. freeze pane(s) k. autofill (flash fill) using fill handle 2. Form teams to practice editing tools by asking each other significant questions that clarify various points of view and draw conclusions. 3. Pass an editing worksheet assessment with an 80% score or higher. 	<p>Career Ready Practice: 1, 2, 4, 5, 9, 10</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.1, 2.3, 2.5 Technology: 4.2, 4.3 Problem Solving & Critical Thinking: 5.1, 5.2, 5.4 Leadership & Teamwork: 9.3, 9.7 Technical Knowledge & Skills: 10.1</p>

<p>(10 hours)</p>		<p>Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
<p>F. FORMATTING A WORKSHEET</p> <p>Understand and apply basic formatting tools of a worksheet.</p> <p>(10 hours)</p>	<ol style="list-style-type: none"> 1. Define, explain, and demonstrate the following: <ol style="list-style-type: none"> a. default settings b. bold, italicize, underline c. change font style and font size d. cell borders e. theme colors and styles f. increase/decrease font size g. cell alignment, increase/decrease indents, and orientation h. wrap text i. format painter j. merge and center k. format numbers such as currency, percentage, decimal, etc. 2. Define, explain, and demonstrate the different functions of styles: <ol style="list-style-type: none"> a. conditional formatting b. format as a table c. cell styles 3. Define, explain, demonstrate, and apply the following: <ol style="list-style-type: none"> a. adjust rows and columns height and width b. sort and filter data c. find and select data d. margins e. headers and footers f. page and line breaks 4. Pass formatting a worksheet assessment with an 80% score or higher. 	<p>Career Ready Practice: 1, 2, 4, 5, 10</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.1, 2.3, 2.5 Technology: 4.2, 4.3 Problem Solving & Critical Thinking: 5.1, 5.2 Technical Knowledge & Skills: 10.1 Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
<p>G. FORMULAS</p> <p>Understand and apply basic formulas of a worksheet.</p>	<ol style="list-style-type: none"> 1. Define the following: <ol style="list-style-type: none"> a. formula b. absolute vs. relative 2. Explain and demonstrate simple formulas and perform appropriate operations utilizing the proper syntax and order of operations. 	<p>Career Ready Practice: 1, 2, 4, 5, 10</p> <p>CTE Anchor:</p>

<p>(20 hours)</p>	<ol style="list-style-type: none"> 3. Enter absolute and relative cell addresses and references in formulas. 4. Demonstrate and practice arithmetic operations. 5. Define, explain, and demonstrate simple formulas (built-in functions) such as: <ol style="list-style-type: none"> a. SUM b. AVERAGE c. MIN d. MAX e. COUNT f. COUNTA g. IF 6. Define, explain, and demonstrate the AutoSum button. 7. Practice editing values to recalculate formulas. 8. Practice troubleshooting formulas. 9. Pass a formulas assessment with an 80% score or higher. 	<p>Academics: 1.0</p> <p>Communications: 2.1, 2.3, 2.5</p> <p>Technology: 4.2, 4.3</p> <p>Problem Solving & Critical Thinking: 5.1, 5.2, 5.3</p> <p>Technical Knowledge & Skills: 10.1, 10.3</p> <p>Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
<p>H. CHARTS</p> <p>Understand and apply charts in a worksheet.</p>	<ol style="list-style-type: none"> 1. Define chart. 2. Select a range of cells to create a chart. 3. Apply and practice creation of charts and integration of charts to a worksheet: <ol style="list-style-type: none"> a. identify chart types b. demonstrate various chart styles c. move and resize a chart d. explode and color a chart e. use the chart layout to add titles, data labels, legends, etc. 4. Form teams to practice creating charts and ask each other significant questions that clarify various points of view and draw conclusions. 5. Pass a chart assessment with an 80% score or higher. 	<p>Career Ready Practice: 1, 2, 4, 5, 9, 10</p> <p>CTE Anchor:</p> <p>Academics: 1.0</p> <p>Communications: 2.1, 2.3, 2.5</p> <p>Technology: 4.2, 4.3</p> <p>Problem Solving & Critical Thinking: 5.1, 5.2, 5.3</p> <p>Leadership & Teamwork: 9.3, 9.7</p>

<p>(15 hours)</p>		<p>Technical Knowledge & Skills: 10.1, 10.3 Demonstration & Application: 11.1</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
<p>I. EMPLOYABILITY SKILLS AND RESUME PREPARATION REVIEW</p> <p>Understand, apply, and evaluate employability and resume preparation skills.</p>	<ol style="list-style-type: none"> 1. Review and define employer requirements for soft skills such as: <ol style="list-style-type: none"> a. attitude toward work b. communication and collaboration c. critical thinking, problem solving, and decision-making d. customer service e. diversity in the workplace f. flexibility and adaptability g. interpersonal skills h. leadership and responsibility i. punctuality and attendance j. quality of work k. respect, cultural and diversity differences l. teamwork m. time management n. trust and ethical behavior o. work ethic 2. Review a career plan that reflects career interests, pathways, and post-secondary options. 3. Create/revise a resume, cover letter and/or portfolio. 4. Demonstrate, analyze, research, and review the role of online job searching platforms and career websites to make informed decisions. 5. Review the importance of assessing social media account content for professionalism. 6. Review and complete and/or review an on-line job application. 	<p>Career Ready Practice: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11</p> <p>CTE Anchor: Academics: 1.0 Communications: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 Career Planning & Management: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9 Technology: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6 Problem Solving & Critical Thinking: 5.1, 5.2, 5.4 Responsibility & Flexibility: 7.2, 7.3, 7.4, 7.5, 7.7 Ethics & Legal Responsibilities: 8.3, 8.4, 8.5 Leadership & Teamwork:</p>

(4 hours)	<ol style="list-style-type: none"> 7. Review and demonstrate interview skills to get the job: <ol style="list-style-type: none"> a. do's and don'ts for job interviews b. how to dress for the job 8. Review and demonstrate and create sample follow-up letters. 9. Review the importance of the continuous upgrading of job skills as it relates to: <ol style="list-style-type: none"> a. certification, licensure, and/or renewal b. professional organizations/events c. industry associations and/or organized labor 	<p>9.1, 9.2, 9.3, 9.4, 9.6, 9.7</p> <p>Technical Knowledge & Skills: 10.1, 10.3</p> <p>Demonstration & Application: 11.1, 11.2, 11.5</p> <p>CTE Pathway: A7.1, A7.2, A7.4</p>
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