

**Career Technical Education (CTE) Course Outline**

<b>Course Title:</b>	Microcomputer Applications/4: Database Management
<b>Course Number:</b>	75-35-88
<b>Date:</b>	July 2024
<b>Industry Sector:</b>	Business and Finance
<b>Pathway:</b>	Business Management
<b>CBEDS Title:</b>	Business Technology
<b>CBEDS Code:</b>	4623
<b>Credits:</b>	5

**Hours:**

Total
80

**Course Description:**

This competency-based course is the fourth in a sequence of courses designed for computer operation. It provides students with technical instruction and practical experience in database management. It includes an introduction, safety and ergonomics, database introduction, creating a database, tables, forms, queries, reports, printing a database, 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.

<b>Prerequisites:</b>	Enrollment requires successful completion of the Microcomputer Applications/3: Presentations (75-35-86) course.
<b>NOTE:</b>	For Perkins purposes this course has been designated as a <b>capstone</b> course.  This course <b>cannot</b> be repeated once a student receives a Certificate of Completion.
<b>A-G Approval</b>	N/A
<b>Methods of Instruction:</b>	Lectures and discussion, demonstrations, student hands-on practice, individualized instruction, critical thinking and listening skills, and peer teaching and cooperative learning.
<b>Student Evaluation:</b>	Summative: End of section assessments
<b>Industry Certification:</b>	N/A
<b>Recommended Texts:</b>	Fehl, Alec, Scott, Alex; Linford, Ben; Ewell, Ian. <u><a href="#">Building a Foundation with Microsoft Office 2021 &amp; 365</a></u> . Labyrinth Learning, 2022.  Freund, Steven M.; Hoisington, Corinne; Last, Mary Z.; Pratt, Philip J.; Sebok, Susan L.; Vermaat, Misty E. <u><a href="#">Shelly Cashman Series Microsoft Office 365 &amp; Office 2021: Introductory, 1<sup>st</sup> Edition</a></u> , Cengage Learning, 2021.  Nielsen, Joyce J.; Weixel, Suzanne; Wempen, Faith. <u><a href="#">Learning Microsoft Office 365 Level 1, 2022</a></u> , Pearson, 2022.
<b>Link to Resource Folder</b>	<u><a href="https://bit.ly/microcompapp4resources">https://bit.ly/microcompapp4resources</a></u>  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

<b>COMPETENCY AREAS AND STATEMENTS</b>	<b>MINIMAL COMPETENCIES</b>	<b>STANDARDS</b>
<p><b>A. INTRODUCTION REVIEW</b></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"> <li>1. Review the scope and purpose of the course.</li> <li>2. Review classroom policies and procedures.</li> <li>3. Review the importance of prioritizing work.</li> <li>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.</li> <li>5. Review the opportunities available for promoting gender equity and the representation of non-traditional populations.</li> <li>6. Review and recognize the importance of ethical behavior, responsibility, teamwork, respecting individual and cultural differences, and diversity in the workplace.</li> <li>7. Review the duties and job roles as they apply to the Business and Finance industry sector.</li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 3, 4, 7, 8, 9, 11</p> <p><b>CTE Anchor:</b> Academics: 1.0 Communications: 2.1, 2.3, 2.5 Career Planning &amp; 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 &amp; Flexibility: 7.3, 7.4 Ethics &amp; Legal Responsibilities: 8.4 Leadership &amp; Teamwork: 9.3, 9.6</p> <p><b>CTE Pathway:</b> A4.2, A7.1, A7.2, A7.3, A7.4</p>
<p><b>B. SAFETY AND ERGONOMICS REVIEW</b></p> <p>Review, understand, apply, and demonstrate the</p>	<ol style="list-style-type: none"> <li>1. Review and explain classroom and workplace first aid and emergency procedures.</li> <li>2. Review and research the California Occupational Safety and Health Administration (Cal/OSHA) workplace requirements to make informed decisions.</li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 6, 7, 8, 10, 11</p> <p><b>CTE Anchor:</b> Academics:</p>

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

<p>(10 hours)</p>	<ul style="list-style-type: none"> <li>i. navigation mode</li> <li>j. work area</li> <li>k. navigation tools</li> </ul> <ol style="list-style-type: none"> <li>5. Save the database using the correct file name for the data storage media.</li> <li>6. Demonstrate how to close a database.</li> <li>7. Retrieve an existing database.</li> <li>8. Pass a database introduction assessment with an 80% score or higher.</li> </ol>	<p>Technical Knowledge &amp; Skills: 10.1 Demonstration &amp; Application: 11.1</p> <p><b>CTE Pathway:</b> A7.1, A7.2</p>
<p><b>D. CREATING A DATABASE</b></p> <p>Understand, apply, and demonstrate creating a database.</p> <p>(10 hours)</p>	<ol style="list-style-type: none"> <li>1. Describe the uses of database applications.</li> <li>2. Define and create a database based on structured information such as adding: <ul style="list-style-type: none"> <li>a. tables</li> <li>b. fields</li> <li>c. data types</li> <li>d. records</li> </ul> </li> <li>3. Review the proper use of menus, toolbars, dialog boxes, and shortcut keystrokes.</li> <li>4. Explain and demonstrate how to add, edit, and/or delete records.</li> <li>5. Demonstrate how to close a database.</li> <li>6. Open an existing database template to save in a storage media.</li> <li>7. Demonstrate how to add, edit, and/or delete table records to the existing template and close.</li> <li>8. Explain the importance of: <ul style="list-style-type: none"> <li>a. collecting, organizing, analyzing, and interpreting data</li> <li>b. accurate documentation, taking necessary steps to protect data integrity</li> </ul> </li> <li>9. Pass a create a database assessment with an 80% score or higher.</li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 8, 10</p> <p><b>CTE Anchor:</b> Academics: 1.0 Communications: 2.1, 2.3, 2.5 Technology: 4.2 Problem Solving &amp; Critical Thinking: 5.4 Ethics &amp; Legal Responsibilities: 8.3 Technical Knowledge &amp; Skills: 10.1 Demonstration &amp; Application: 11.1</p> <p><b>CTE Pathway:</b> A7.1, A7.2</p>
<p><b>E. TABLES</b></p>	<ol style="list-style-type: none"> <li>1. Review table design features.</li> <li>2. Open an existing database in datasheet view or design view.</li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 4, 5, 10</p>

<p>Understand, apply, and demonstrate creating tables in a database.</p> <p>(10 hours)</p>	<ol style="list-style-type: none"> <li>3. Explain, identify, and ask questions on how to set and modify field properties to make informed decisions.</li> <li>4. Demonstrate and explain how to: <ol style="list-style-type: none"> <li>a. sort records</li> <li>b. filter records</li> <li>c. find/replace data</li> <li>d. import/export data sources</li> <li>e. hide/unhide fields</li> </ol> </li> <li>5. Explain and demonstrate relational database and how to: <ol style="list-style-type: none"> <li>a. link tables enforcing referential integrity</li> <li>b. one-to-many relationships</li> <li>c. one-to-one relationship</li> <li>d. many-to-many relationships</li> </ol> </li> <li>6. Pass a tables assessment with an 80% score or higher.</li> </ol>	<p><b>CTE Anchor:</b></p> <p>Academics: 1.0</p> <p>Communications: 2.1, 2.3, 2.5</p> <p>Technology: 4.2</p> <p>Problem Solving &amp; Critical Thinking: 5.1, 5.4</p> <p>Technical Knowledge &amp; Skills: 10.1</p> <p>Demonstration &amp; Application: 11.1</p> <p><b>CTE Pathway:</b> A7.1, A7.2</p>
<p><b>F. FORMS</b></p> <p>Understand, apply, and demonstrate creating forms in a database.</p>	<ol style="list-style-type: none"> <li>1. Define and explain the benefits of using forms.</li> <li>2. Explain and demonstrate how to create a form using: <ol style="list-style-type: none"> <li>a. the wizard (form wizard button)</li> <li>b. design view (form design button)</li> <li>c. layout view (blank form button)</li> </ol> </li> <li>3. Demonstrate how to modify forms in layout and design view.</li> <li>4. Explain and demonstrate how to: <ol style="list-style-type: none"> <li>a. enter records into a form</li> <li>b. filter records by form</li> </ol> </li> <li>5. Pass a forms assessment with an 80% score or higher.</li> </ol>	<p><b>Career Ready Practice:</b> 1, 2, 4, 10</p> <p><b>CTE Anchor:</b></p> <p>Academics: 1.0</p> <p>Communications: 2.1, 2.3, 2.5</p> <p>Technology: 4.2, 4.3</p> <p>Technical Knowledge &amp; Skills: 10.1</p> <p>Demonstration &amp; Application: 11.1</p>

(10 hours)		<b>CTE Pathway:</b> A7.1, A7.2
<b>G. QUERIES</b>  Understand, apply, and demonstrate creating queries in a database.	<ol style="list-style-type: none"> <li>1. Define and explain the benefits of queries.</li> <li>2. Explain the different types of queries: <ol style="list-style-type: none"> <li>a. simple one-table query</li> <li>b. multiple table query</li> </ol> </li> <li>3. Define, explain, and demonstrate criteria in queries: <ol style="list-style-type: none"> <li>a. wildcard</li> <li>b. field formats such as: currency, date, time, yes/no</li> <li>c. operators such as: AND, BETWEEN, OR, IN</li> </ol> </li> <li>4. Create and select queries using: <ol style="list-style-type: none"> <li>a. simple one-table query</li> <li>b. multiple table query</li> <li>c. design view</li> </ol> </li> <li>5. Explain and demonstrate how to: <ol style="list-style-type: none"> <li>a. add/remove fields to a query</li> <li>b. use multiple fields in a query</li> <li>c. run a query</li> <li>d. modify a query</li> <li>e. move fields within a query</li> <li>f. sort a query</li> <li>g. save as and save a query</li> <li>h. printing a query</li> </ol> </li> <li>6. Pass a queries assessment with an 80% score or higher.</li> </ol>	<b>Career Ready Practice:</b> 1, 2, 4, 5, 10  <b>CTE Anchor:</b> 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  <b>CTE Pathway:</b> A7.1, A7.2
<b>H. REPORTS</b>  Understand, apply, and demonstrate creating reports in a database.	<ol style="list-style-type: none"> <li>1. Define and explain the benefits of reports.</li> <li>2. Create a report using design view and layout view.</li> <li>3. Create a report using the following to clarify various sources of data to make informed decisions: <ol style="list-style-type: none"> <li>a. tables</li> <li>b. queries</li> <li>c. report wizard</li> </ol> </li> <li>4. Demonstrate how to modify field(s), format and organize a report.</li> <li>5. Explain and demonstrate sorting a report data.</li> <li>6. Explain and demonstrate how to export/import a report.</li> <li>7. Pass a reports assessment with an 80% score or higher.</li> </ol>	<b>Career Ready Practice:</b> 1, 2, 4, 5, 10  <b>CTE Anchor:</b> Academics: 1.0 Communications: 2.1, 2.3, 2.5 Technology: 4.2



(10 hours)		Problem Solving & Critical Thinking: 5.1, 5.4 Technical Knowledge & Skills: 10.1, 10.3 Demonstration & Application: 11.1  <b>CTE Pathway:</b> A7.1, A7.2
<b>I. PRINTING A DATABASE</b>  Understand, apply, and demonstrate printing options and setup of a database.	<ol style="list-style-type: none"> <li>1. Explain the process of printing database objects.</li> <li>2. Explain the difference types of printing options:             <ol style="list-style-type: none"> <li>a. quick print</li> <li>b. print</li> <li>c. backstage view</li> <li>d. print preview</li> </ol> </li> <li>3. Demonstrate and compare the printing process; analyzing the data to produce outcomes:             <ol style="list-style-type: none"> <li>a. tables</li> <li>b. forms</li> <li>c. queries</li> <li>d. reports</li> </ol> </li> <li>4. Explain, understand, and demonstrate the following terms:             <ol style="list-style-type: none"> <li>a. page size</li> <li>b. margin</li> <li>c. print data only</li> <li>d. portrait</li> <li>e. landscape</li> <li>f. columns</li> <li>g. page setup</li> </ol> </li> <li>5. Pass a printing database assessment with an 80% score or higher.</li> </ol>	<b>Career Ready Practice:</b> 1, 2, 4, 5, 10  <b>CTE Anchor:</b> Academics: 1.0 Communications: 2.1, 2.3, 2.5 Technology: 4.2, 4.3 Problem Solving & Critical Thinking: 5.3 Technical Knowledge & Skills: 10.1 Demonstration & Application: 11.1  <b>CTE Pathway:</b> A7.1, A7.2
(5 hours)		

<p><b>J. EMPLOYABILITY SKILLS AND RESUME PREPARATION REVIEW</b></p> <p>Understand, apply, and evaluate employability and resume preparation skills.</p>	<ol style="list-style-type: none"> <li>1. Review and define employer requirements for soft skills such as: <ol style="list-style-type: none"> <li>a. attitude toward work</li> <li>b. communication and collaboration</li> <li>c. critical thinking, problem solving, and decision-making</li> <li>d. customer service</li> <li>e. diversity in the workplace</li> <li>f. flexibility and adaptability</li> <li>g. interpersonal skills</li> <li>h. leadership and responsibility</li> <li>i. punctuality and attendance</li> <li>j. quality of work</li> <li>k. respect, cultural and diversity differences</li> <li>l. teamwork</li> <li>m. time management</li> <li>n. trust and ethical behavior</li> <li>o. work ethic</li> </ol> </li> <li>2. Review a career plan that reflects career interests, pathways, and post-secondary options.</li> <li>3. Create/revise a resume, cover letter and/or portfolio.</li> <li>4. Demonstrate, analyze, research, and review the role of online job searching platforms and career websites to make informed decisions.</li> <li>5. Review the importance of assessing social media account content for professionalism.</li> <li>6. Review and complete and/or review an on-line job application.</li> <li>7. Review and demonstrate interview skills to get the job: <ol style="list-style-type: none"> <li>a. do's and don'ts for job interviews</li> <li>b. how to dress for the job</li> </ol> </li> <li>8. Review and demonstrate and create sample follow-up letters.</li> <li>9. Review the importance of the continuous upgrading of job skills as it relates to: <ol style="list-style-type: none"> <li>a. certification, licensure, and/or renewal</li> </ol> </li> </ol>	<p><b>Career Ready Practice:</b></p> <p>1, 2, 3, 4, 5, 7, 8, 9, 10, 11</p> <p><b>CTE Anchor:</b></p> <p>Academics: 1.0</p> <p>Communications: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6</p> <p>Career Planning &amp; Management: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9</p> <p>Technology: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6</p> <p>Problem Solving &amp; Critical Thinking: 5.1, 5.2, 5.4</p> <p>Responsibility &amp; Flexibility: 7.2, 7.3, 7.4, 7.5, 7.7</p> <p>Ethics &amp; Legal Responsibilities: 8.3, 8.4, 8.5</p> <p>Leadership &amp; Teamwork: 9.1, 9.2, 9.3, 9.4, 9.6, 9.7</p> <p>Technical Knowledge &amp; Skills: 10.1, 10.3</p> <p>Demonstration &amp; Application: 11.1, 11.2, 11.5</p> <p><b>CTE Pathway:</b></p>
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(4 hours)	b. professional organizations/events c. industry associations and/or organized labor	A7.1, A7.2, A7.4
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## ***ACKNOWLEDGEMENTS***

Thanks to the following individuals for their contributions in developing and editing this curriculum:

Ana Martinez, Aida Guerrero, Julio C. Navarro, Julia Rosario, and Katherine Valenzuela