SWEETWATER UNION HIGH SCHOOL DISTRICT

DIVISION OF ADULT EDUCATION

Career Technical Education

## Computer Applications - Database

### COURSE APPROVAL

##### Course submitted by:

##### \_\_Mary Alvarado\_\_\_\_\_\_ \_Teacher\_\_\_ \_Imperial Beach Adult School.\_

Name Position Site

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Signature Date

##### Course reviewed by CTE Coordinator

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Signature Date

##### Course approved by the Sweetwater Board of Trustees

May 21, 2001

##### Course Revision:

May 20, 2002

May 17, 2004

May 9, 2006

May 20, 2008

July 26, 2010

Title Change:

Nee: “Computer Operator/Software Applications – Database”

August 18, 2008

July 23, 2012

May 12, 2014

June 27, 2016

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## Computer Applications-Database

##### Course reviewed by Members of the Industry Advisory Board (EAB)

1. **\_\_**Robert F. Gonzales**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_**February 28, 2011**\_\_**

Name of Advisory Committee Member Date

**\_**Savannah’s Angel Party Concession**\_\_\_\_\_\_\_ \_\_**Owner**\_\_\_\_\_\_\_\_\_\_\_\_**

Place of Business Occupation

2**. \_\_**Maria A Mendoza**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_**March 2, 2011**\_\_\_\_\_**

Name of Advisory Committee Member Date

**\_\_\_**Home Start Inc.**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**Healthcare Coverage Specialist

Place of Business Occupation

3. **\_**Lisa Kershner **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**March 7, 2011**\_\_\_\_\_\_**

Name of Advisory Committee Member Date

**\_**Ministry Staffing**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**Manager**\_\_\_\_\_\_\_\_\_\_\_**

Place of Business Occupation

4**. \_**Didi E. Arceo **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**March 9, 2011**\_\_\_\_\_\_**

Name of Advisory Committee Member Date

**\_**Didi’s 1040 & More**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**Owner**\_\_\_\_\_\_\_\_\_\_\_\_\_**

Place of Business Occupation

5. **\_\_**Sharon Ruonick**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**March 10, 2011**\_\_\_\_\_**

Name of Advisory Committee Member Date

**\_\_**Sharp Chula Vista**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_**Manager**\_\_\_\_\_\_\_\_\_\_\_**

Place of Business Occupation

## Computer Applications - Database

# Basic Course Information

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| --- | --- |
| **Course Title:** | **Computer Applications - Database** |
| **CTE Industry Sector:** | **Information Technology Industry** |
| **Career Pathway:** | **Information Support & Services** |

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| --- | --- | --- | --- | --- | --- | --- |
| **Course Level:** |  | Introductory | x | Concentration | x | Capstone |

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| **Course Number:** | **0666** |
| **CBEDS Title:** | **Office Systems and Technologies** |
| **CBEDS Number:** | **4615** |

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| Course Hours: | A minimum of 130 hours or until competencies are achieved. |
| Prerequisites: | Minimum typing speed of 30 words per minute (recommended). |
| Evaluation: | 1. Instructor observation and assessment of student proficiency in word processing operational procedures.  2. Satisfactory attendance and participation in class activities as evaluated by the instructor.  3. Students demonstrating proficiency in the operation of one word processing program may receive one semester credit of high school credit; students who complete intermediate word processing may receive another credit for a total of two high school credits. |
| Conditions for Repetition: | Students who have failed to meet the objectives because of insufficient attendance or inability to master content may repeat the course with updated equipment, software, or content. |
| **Articulation Information:** | Southwest College  Microcomputer Database Software: Access CIS 134 |
| **Articulation Credit:** | 1 Credit |
| **High School elective Credit:** | This class is offered on a CREDIT/NONCREDIT basis. Upon successful completion of course objectives, up to two semester credits of high school elective credit may be earned (60 hours minimum per credit). A variety of diverse software applications are available to use over the course of a semester. Students may elect to attend additional hours to learn advanced competencies or other database software programs. |
| **Advisory Committee Meetings:** |  |

**Course Description**

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| Database is a comprehensive, competency-based course, which combines concepts, skills, and applications to prepare the student for entry-level employment. |

**Instructional Strategies**

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| Teacher lecture and demonstration 10%  Teacher supervision of lab work 80%  Instructor/student consultations 10% |

**Instructional Materials**

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| Textbooks: Microsoft Office 2010 Access Complete |

**Career Plan: How this Course fits into the Course Sequence**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sequence of Courses** | **Course Level** | | | **Primary Funding Source** | | **Perkins**  **Funded** | **Total Duration** |
| Name of Course | Intro. | Concentration | Capstone | District/COE | ROCP | Yes or No | (In hours) |
| Intro to Computer Concepts |  |  |  |  |  | Yes | 120 |
| Keyboarding |  |  |  |  |  | Yes | 60 |
| Computer Applications – MS Word 2010 |  |  |  |  |  | Yes | 300 |
| Computer Applications – MS Excel 2010 |  |  |  |  |  | Yes | 180 |
| Computer Applications – MS Access 2010 |  |  |  |  |  | Yes | 180 |
| Computer Applications – MS PowerPoint 2010 |  |  |  |  |  | Yes | 180 |
| * Student can choose from the following groups: | | | | | | | |
|  |  |  |  |  |  | Yes |  |
|  |  |  |  |  |  | Yes |  |

**Occupations for Identified Pathway**

|  |  |
| --- | --- |
| Pathway occupations organized by level of education and training required for workplace entry.(Asterisked occupations require certification or licensure.) | |
| Postsecondary Training (certification and/or AA degree) | College University (bachelor’s degree or higher) |
| Computer Operators  * Data Entry Keyers * Office Support Supervisor | • Computer Support Specialist  * Database Administrators * Executive Secretaries |

# Course Goals

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| 1. Gain an introduction to the background of the Information Technology industry as well as the qualifications of successful computer operators. |
| 1. Learn the fundamental concepts of databases including the purpose, advantages and terminology of databases. |
| 1. Learn to run one database software application program. |
| 1. Learn to operate specific computer equipment, including printers. |
| 1. Be able to meet requirements for entry-level employment as database software operators. |
| 1. Learn how to develop a career plan and complete documentation such as a job application resume, and cover letter. |
| 1. Learn work based expectations and the day-to-day aspects of running a business. |

# Instructional Module/Unit

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| --- | --- | --- | --- | --- | --- |
| **Unit 1** | **Introduction** | Class Hrs. | 4 | Lab Hrs. |  |

Description:

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| Students gain an introduction to the course and learn class expectations. They are introduced to the common traits exhibited by people successfully working in this field, personal qualifications, interests, aptitiudes, and knowledge of skills necessary to succeed this career pathway. Students examine the historical and economic background of this field as well as current opportunities available. In addition students will examine the personal, professional, and educational requirements needed to meet their goals. |
| **Unit 1 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** Identify the personal qualifications, interests, aptitudes, knowledge and skills of successfully using computer applications. |
| **2.** Demonstrate an understanding of personal, professional, and educational requirements of this career field. |

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| **Unit 2** | **Fundamental Concepts** | Class Hrs. | 15 | Lab Hrs. | **45** |

Description:

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| Students will be instructed on the fundamental concepts of databases including the purpose, advantages and terminology of databases. |
| **Unit 2 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** Plan and Design Databases |
| **1.1** Determine appropriate data inputs for your database |
| **1.2** Determine appropriate data outputs for your database |
| **1.3** Create table structure |
| **1.4** Establish table relationships |
| **2.** Work with Access |
| **2.1** Use the Office Assistant |
| **2.2** Select an object using the Objects Bar |
| **2.3** Print database objects (tables, forms, reports, queries) |
| **2.4** Navigate through records in a table, query, or form |
| **2.5** Create a database (using a Wizard or in Design View) |
| **3.** Build and Modify Tables |
| **3.1** Create tables by using the Table Wizard |
| **3.2** Set primary keys |
| **3.3** Modify field properties |
| **3.4** Use multiple data types |
| **3.5** Modify tables using Design View |
| **3.6** Use the Lookup Wizard |
| **3.7** Use the input mask wizard |
| 4.Build & Modify Forms |
| **4.1**Create a form with the Form Wizard |
| **4.2** Use the Control Toolbox to add controls |
| **4.3** Modify Format Properties (font, style, font size, color, caption, etc.) of controls |
| **4.4** Use form sections (headers, footers, detail) |
| **4.5** Use a Calculated Control on a form |
| **5.** View and Organize Information |
| **5.1** Use the Office Clipboard |
| **5.2** Switch between object Views |
| **5.3** Enter records using a datasheet |
| **5.4** Enter records using a form |
| **5.5** Delete records from a table |
| **5.6** Find a record |
| **5.7** Sort records |
| **5.8** Apply and remove filters (filter by form and filter by selection) |
| **5.9** Specify criteria in a query |
| **5.10** Display related records in a sub-datasheet |
| **5.11** Create a calculated field |
| **5.12** Create and modify a multi-table select query |
| **6.** Define relationships |
| **6.1** Establish relationships |
| **6.2** Enforce referential integrity |

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| **Unit 3** | **Software Application Program** | Class Hrs. | 15 | Lab Hrs. | **34** |

Description

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| Students will be instructed on how to run one database application program. They will then practice these skills completing database projects in the classroom. |
| **Unit 3 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** Produce reports |
| **1.1** Create a report with the Report Wizard |
| **1.2** Preview and print a report |
| **1.3** Move and resize a control |
| **1.4** Modify format properties (font, style, font size, color, caption, etc.) |
| **1.5** Use the Control Toolbox to add controls |
| **1.6** Use report sections (headers, footers, detail) |
| **1.7** Use a Calculated Control in a report |
| **2.** Integrate with other applications |
| **2.1** Import data to a new table |
| **2.2** Save a table, query, form as a Web page |
| **2.3** Publish a presentation to the Web |
| **2.4** Add Hyperlinks |
| **3.** Use Access Tools |
| **3.1** Print Database Relationships |
| **3.2** Backup and Restore a database |
| **3.3** Compact and Repair a database |

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| **Unit 4** | **Computer Peripheral Equipment** | Class Hrs. | 5 | Lab Hrs. | **30** |

Description

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| Students will be instructed how to use printers, scanners, and other computer peripheral equipment. They will then practice using them within the classroom. |
| **Unit 4 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** Demonstrate basic printer functions, including printer commands, screen print and print to/from disk, font selection, and printer enhancements. |
| **2.** Operate printer and/or scanner |
| **3.** Operate equipment in a safe manner. |

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| **Unit 5** | **Database Software Operator Employment** | Class Hrs. | 5 | Lab Hrs. | **15** |

Description

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| Students will be instructed on the requirements for holding an entry-level position as a database software operator. These skills will be practiced in the classroom until student is able to meet the requirements for the job. |
| **Unit 5 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** Exhibit proficiency in the use of word processing software and peripherals. |
| **2.** Incorporate fundamental principles in the production of professional documents in an organized and efficient manner. |
| **3.** Discuss and demonstrate an awareness of advanced career and educational opportunities. |

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| **Unit 6** | **Job Career Planning** | Class Hrs. | 2 | Lab Hrs. | **4** |

Description:

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| Students create a sample cover letter, personal resume, completed job application, thank you letter, and list of personal references. They develop their personal career portfolio that contains documents for getting a job as well as a career plan and selected work samples. Students practice appropriate interviewing techniques. |
| **Unit 6 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** Demonstrate the ability to write a cover letter. |
| **2.** Demonstrate the ability to complete a job application. |
| **3.** Demonstrate the ability to write a resume. |
| **4.** Demonstrate successful job interview skills. |
| **5.** Successfully assemble a personal career portfolio. |

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| **Unit 7** | **Work-Based Learning Experiences** | Class Hrs. | 2 | Lab Hrs. | **4** |

Description

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| Students will be taught the work based expectations of punctuality, professionalism, dress, demeanor, and telephone etiquette. Students will engage in discussions with the instructor regarding workplace experiences and the day-to-day aspects of running a small business. |
| **Unit 7 Competency:** Upon Completion of this unit, the student is able to: |
| **1.** .Demonstrate the ability to work successfully in the Information Technology Industry. |
| **2.** Demonstrate the ability to “go to work” with a proper attitude towards the work place expectations of punctuality, professionalism, dress, demeanor, and telephone etiquette. |

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| **Totals** | **Theory Hrs.** | **48** | **Lab Hrs.** | **132** | **Total Hrs.** | **180** |

**APPENDIX A:**

**MATRIX FOR ALL ASPECTS OF THE INDUSTRY**

All Aspects of the Industry is a key element of the Carl D. Perkins Vocational and Applied Technology Education Act and the School-to Work Opportunities Act. Both acts emphasize giving students a comprehensive perspective and range of skills across an industry. The Perkins Act requires programs to “provide students with strong experience in and understanding of all aspects of the industry students are preparing to enter”. The Act identifies eight aspects in particular, which are common to any business or industry. Programs receiving Perkins funds are required to include the teaching of these concepts to provide students with the skills necessary to be successful in their employment.

**STRATEGIES**

Below is a matrix showing the components of “All Aspects of the Industry for the *name of Course*.” A list of strategies is provided for each component.

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| **ASPECTS** | **SEQUENCE OF COURSES** | | | | |
|  | **Course 1: Introduction to Computer Concepts** | **Course 2: Computer Applications Word Processing** | **Course 3: Computer Applications Spreadsheet** | **Course 4: Computer Applications Presentation Software** | **Course 5: Computer Applications Database** |
| **Planning** | Bridge the gap by becoming technologically literate students able to access information, solve problems, create, innovate and express themselves through the skillful use of a variety of technologies. | Set goals and objectives so student can effectively use word processing in their daily lives and areas of employment. | Set goals and objectives so students can effectively use electronic spreadsheets in a variety of business and job environments. | Set goals and objectives showing student how to effectively use Presentation Software for employment and personal use. | Set goals and objectives showing student how to effectively use Database Software for employment and personal use. |
| **Management** | Learn basic concepts of how computer programs work, through a hands-on, show and tell type approach with a focus on increasing foundational skills. | Lead students through management of class goals and objectives for completion of assignments and projects.  . | Lead students through management of class goals and objectives for completion of assignments and projects.  . | Lead students through management of class goals and objectives for completion of assignments and projects.  . | Lead students through management of class goals and objectives for completion of assignments and projects. |
| **Finance** | Access up-to-date and useful information including current technologies; allowing student to become better decision maker when purchasing computing devices. | N/A | Create and maintain electronic spreadsheets. | N/A | N/A |
| **Technical &**  **Production Skills** | Acquire new avenues for learning (such as Internet research) and overcome barriers associated with computing so that student can achieve success and gain practical skills. | Students learn fundamentals of Word processing and basic communication skills through computer software applications. | Students learn how to create worksheets and workbooks; learn how to use formulas; and learn effective uses of charts. | Students learn fundamentals and customization of Presentation Software; and communication skills through integration of other software applications and email/web presentations. | Students learn fundamentals and customization of Database Software; and communication skills through integration of other software applications and email/web presentations. |
| **Underlying Principles**  **Of Technology** | Gain awareness of the underlying principles of technology which are essential for future development. | Students learn concepts of word processing to be able to meet employment requirements; students trained to be able to pass the MOU certification for job employment. | Students use technology to analyze and solve problems; learn and upgrade basic computer skills. | Students learn concepts of Presentation Software to be able to meet employment requirements; students trained to be able to pass the MOUS certification for employment. | Students learn concepts of Database Software to be able to meet employment requirements; students trained to be able to pass the MOU certification for employment. |
| **Labor Issues** | Obtain effective learning strategies and become aware of career options and lifelong learning opportunities. (General workplace knowledge and skills are infused throughout the course). | Certification of level skills for job requirements. | Certification of level skills for job requirements. | Certification of skills for job requirements. | Certification of skills for job requirements. |
| **Community Issues** | Use technology in an ethical and legal manner, and understand how technology affects society. | Students are learning skills to make them productive and proficient members of the community. | Students are learning skills to make them productive and proficient members of the community. | Students are learning skills to make them productive and proficient members of the community. | Students are learning skills to make them productive and proficient members of the community. |
| **Health, Safety, &**  **Environmental Issues** | Increase awareness of health, safety and environmental issues ensuring student is able to make informed and responsible decisions. | Ergonomics as well as safety issues related to use of computer equipment and software. | Ergonomics as well as safety issues related to use of computer equipment and software. | Ergonomics as well as safety issues related to use of computer equipment and software. | Ergonomics as well as safety issues related to use of computer equipment and software. |

Standards-Aligned Course: PLC work in progress

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| **Instruction Unit / Subunits** | **Concepts/Skills** | **Benchmarks** | **Student Learning Outcomes** | **Model Curriculum Standards**  **Mentioned = M Reinforced = R Taught = T** | | | | | |
| K & P Anchor |  | Pathway |  | Other |  |
|  |  |  |  |  |  |  |  |  |  |
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