*Prepares Students for College and Careers*

# ▲ Computer Careers

**Course Codes:**

▲ROP 65080    ▲WUHSD 8057    ▲ERUSD 00000    ▲State (CALPADS) 7400

**Industry Sector:**     Business and Finance
**Career Pathway:**     Multiple Pathways
**Classroom Hours:**     180
**Work Based Learning:** 180 (optional)

**Course Leads to:** Post-Secondary Education

**Course Level:** Introductory

**Approved Textbook/Curriculum:** None

| POST-SECONDARY EDUCATION | INDUSTRY CERTIFICATIONS | EMPLOYMENT |
|---|---|---|
| Articulation with College          No<br>Dual Enrollment with College    No<br>UC Approved a-g elective credit   No<br><br>**COLLEGE MAJORS**<br><br>Business Administration & Management<br>Information Technologies<br>Ecommerce<br>Finance<br>Management Science | None<br><br><br>**NEXT STEPS**<br>ROP Business Photography<br>ROP Virtual Enterprise | **Related Careers (O*NET)**<br><br>15-1121.00   Computer Systems Analysts<br>15-1142.00   Network and Computer Systems Administrator<br>15-1131.00   Computer Programmers<br>11-3021.00   Computer and Information Systems Managers<br>15-1152.00   Computer Network Support Specialists<br>15-1122.00   Information Security Analysts |

**Prerequisites:**
None

## Course Description:
Computer Careers prepares students for entry-level jobs in information and communication technology careers. Students will be introduced to all, and be able to explore two, of the following careers: Administrative Assistant, Internet/Web Support Technician, Technology Support Technician, Graphic Designer, Computer Programming Assistant, and/or Network Technician.   Instruction includes lecture, demonstrations and hands-on work. Evaluation is competency based.  Students may have an opportunity to gain exposure of a computer career through workplace learning.

Integrated throughout the course are standards for Career Ready Practice and Academic Content Standards which include: appropriate technical skills and academic knowledge; communication skills; career planning; applied technology; critical thinking and problem solving; personal health and financial literacy; citizenship, integrity, ethical leadership and effective management; work productively while integrating cultural and global competence; creativity and innovation; reliable research strategies, and environment, social and economic impacts of decisions.

## COURSE OUTLINE

### I. ORIENTATION
    A. Introduce course and facilities
    B. Discuss syllabus and major objectives
    C. Explain attendance, grading, classroom procedures, code of conduct
    D. Complete course safety requirements/test

### II. CAREERS IN INFORMATIN AND COMMUNICATION TECHNOLOGIES
    A. Research and report on the specialized occupations within the Information and Communication Technologies industry Sector
    B. Identify the steps in the hiring process from application to employment
    C. List the eligibility requirements for various information technology positions
    D. Explain the impact of pre-employment activities on employability (e.g., financial irresponsibility, criminal record, improper social media behavior, etc.
    E. Describe the physical fitness requirements and the impact of nutrition and a healthy lifestyle on employability/job performance

### III. PREPARING FOR COLLEGE AND CAREERS
    A. Review and Discuss California CTE Model Curriculum Standards for Career Ready Practice
    B. Create an Education Plan and a Career Plan aligned with personal goals
    C. Create a Resumé
    D. Create a Career Portfolio
    E. Complete a handwritten/hand-printed Job Application neatly, legibly and with no corrections or mistakes
    F. Practice a professional job interview
    G. Evening of Excellence Essay

### IV. OPERATING SYSTEM
    A. Recognize basic operating system terms and use commands
    B. Define and use basic Windows terms
    C. Boot the operating system, recognize and access prompts, identify an insertion point, and identify and use special keys on the keyboard
    D. Use operating system commands, including format notations, correct, cancel, and edit commands
    E. Format a data and systems storage device, use copy commands and use verification commands
    F. Manipulate files and identify different storage device sizes and capacities
    G. Identify and use all types of directories and subdirectories; create and remove subdirectories
    H. Identify and use customized techniques
    I. Program and use system devices through operating system
    J. Back-up and restore files
    K. Demonstrate an understanding of and use of basic Windows commands
    L. Demonstrate basic Windows skills including use of the keyboard in Windows, use of the mouse, work with menus, and work with dialogue boxes
    M. Access and use Windows menu

### V. ADMINISTRATIVE ASSISTANT
    A. Demonstrate a thorough understanding of word-processing
    B. Demonstrate an understanding of a spreadsheet
    C. Demonstrate an understanding of a database
    D. Demonstrate an understanding of presentation software

### VI. TECHNOLOGY SUPPORT TECHNICIAN
    A. Understand computer hardware
    B. Understand computer system diagnostics
    C. Identify computer components
    D. Understand applied math and electronics
    E. Understand basic microcomputer support services

### VII. GRAPHIC DESIGNER
    A. Improve spelling skills

## COURSE OUTLINE

    B.  Demonstrate proofreading skills
    C.  Learn graphic design elements
    D.  Identify desktop publishing software and define the purpose
    E.  Create a sample publication, flyers, and a three-page publication
    F.  Understand the creation of a form
    G.  Create a three-page bulletin
    H.  Recognize design functions
    I.  Demonstrate the creation of a catalog
    J.  Understand computer graphics

### VIII. INTERNET/WEB SUPPORT TECHNICIAN

    A.  Demonstrate a thorough understanding of the Internet
    B.  Demonstrate an understanding of browsers
    C.  Demonstrate an understanding of search engines
    D.  Demonstrate an understanding of Internet Service Providers
    E.  Demonstrate an understanding e-mail
    F.  Demonstrate an understanding of special features of the Internet
    G.  Demonstrate an understanding commerce on the World Wide Web
    H.  Design and develop a web site
    I.  Understand the maintenance of web sites
    J.  Understand the marketing of web sites

### IX. COMPUTER PROGRAMMER ASSISTANT

    A.  Demonstrate and understand programming
    B.  Identify different programming languages
    C.  Learn the difference between interpreters and compilers
    D.  Demonstrate knowledge of program control statements
    E.  Understand customizing applications

### X. NETWORK TECHNICIAN

    A.  Demonstrate understanding of hardware concepts for networking
    B.  Understand what constitutes a local area network
    C.  Identify the various networking components and products
    D.  Clarify and identify the method of generating IP addresses
    E.  Understand the set-up of a client machine and a server
    F.  Understand how to employ log in procedures
    G.  Understand how to configure network printers and set up print services
    H.  Operate network applications
    I.  Maintain and troubleshoot network problems
    J.  Employ techniques to maintain security

## PROJECT-BASED LEARNING

(NAME OF PROJECT) (PRESENTATION ON..)

    A. Research
    B. Outline
    C. First Draft
    D. Final Draft
    E. Presentation

## ESSENTIAL STANDARDS AND KEY ASSIGNMENTS
### INDUSTRY SECTOR: Information & Communication Technologies

### ESSENTIAL PATHWAY STANDARD - A1.0

**KEY ASSIGNMENT**

**ESSENTIAL PATHWAY STANDARD - A2.0**

**KEY ASSIGNMENT**

**ESSENTIAL PATHWAY STANDARD – A3.0**

**KEY ASSIGNMENT**

**ESSENTIAL PATHWAY STANDARD – A4.0**

**KEY ASSIGNMENT**

**ESSENTIAL PATHWAY STANDARDS – A5.0**

**KEY ASSIGNMENT**

## CTE MODEL CURRICULUM STANDARDS FOR CAREER READY PRACTICE

1. **Apply appropriate technical skills and academic knowledge.** Career-ready individuals readily access and use the knowledge and skills acquired through experience and education. They make connections between abstract concepts with real-world applications and recognize the value of academic preparation for solving problems, communicating with others, calculating measures, and performing other work-related practices.

2. **Communicate clearly, effectively, and with reason.** Career-ready individuals communicate thoughts, ideas, and action plans with clarity, using written, verbal, electronic, and/or visual methods. They are skilled at interacting with others: they are active listeners who speak clearly and with purpose, and they are comfortable with terminology that is common to workplace environments. Career-ready individuals consider the audience for their communication and prepare accordingly to ensure the desired outcome.

3. **Develop an education and career plan aligned with personal goals.** Career-ready individuals take personal ownership of their educational and career goals and manage their individual plan to attain these goals. They recognize the value of each step in the educational and experiential process, and they understand that nearly all career paths require ongoing education and experience to adapt to practices, procedures, and expectations of an ever-changing work environment. They seek counselors, mentors, and other experts to assist in the planning and execution of education and career plans.

4. **Apply technology to enhance productivity.** Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring and using new technology. They understand the inherent risks—personal and organizational—of technology applications, and they take actions to prevent or mitigate these risks.

5. **Utilize critical thinking to make sense of problems and persevere in solving them.** Career-ready individuals recognize problems in the workplace, understand the nature of the problems, and devise effective plans to solve the problems. They thoughtfully investigate the root cause of a problem prior to introducing solutions. They carefully consider options to solve a problem and, once agreed upon, follow through to ensure the problem is resolved.

6. **Practice personal health and understand financial literacy.** Career-ready individuals understand the relationship between personal health and workplace performance. They contribute to their personal well-being through a healthy diet, regular exercise, and mental health activities. Career-ready individuals also understand that financial literacy leads to a secure future that enables career success.

7. **Act as a responsible citizen in the workplace and the community**. Career-ready individuals understand the obligations and responsibilities of being a member of a community and demonstrate this understanding every day through their interactions with others. They are aware of the impacts of their decisions on others and the environment around them, and they think about the short-term and long-term consequences of their actions. They are reliable and consistent in going beyond minimum expectations and in participating in activities that serve the greater good.

8. **Model integrity, ethical leadership, and effective management.** Career-ready individuals consistently act in ways that align with personal and community-held ideals and principles. They employ ethical behaviors and actions that positively influence others. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the direction and actions of a team or organization, and they recognize the short-term and long-term effects that management's actions and attitudes can have on productivity, morale, and organizational culture.

9. **Work productively in teams while integrating cultural and global competence.** Career-ready individuals contribute positively to every team, as both team leaders and team members. To avoid barriers to productive and positive interaction, they apply an awareness of cultural differences. They interact effectively and sensitively with all members of the team and find ways to increase the engagement and contribution of other members.

10. **Demonstrate creativity and innovation.** Career-ready individuals recommend ideas that solve problems in new and different ways and contribute to the improvement of the organization. They consider unconventional ideas and suggestions by others as solutions to issues, tasks, or problems. They discern which ideas and suggestions may have the greatest value. They seek new methods, practices, and ideas from a variety of sources and apply those ideas to their own workplace practices.

11. **Employ valid and reliable research strategies.** Career-ready individuals employ research practices to plan and carry out investigations, create solutions, and keep abreast of the most current findings related to workplace environments and practices. They use a reliable research process to search for new information and confirm the validity of sources when considering the use and adoption of external information or practices.

12. **Understand the environmental, social, and economic impacts of decisions.** Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact other people, organizations, the workplace, and the environment. They are aware of and utilize new technologies, understandings, procedures, and materials and adhere to regulations affecting the nature of their work. They are cognizant of impacts on the social condition, environment, workplace, and profitability of the organization.

**1: Academics**
Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the industry sector alignment matrix for identification of standards. Note: alignment listed within each sector Anchor Standard

**2: Communications Language Standard**
Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the (career and college) readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. LS 9-10, 11-12.6 Anchor Standard

**3: Career Planning and Management Speaking and Listening Standard**
Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SLS 11-12.2 Anchor Standard

**4: Technology Writing Standard**
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments and information. WS 11-12.6 Anchor Standard

**5: Problem Solving and Critical Thinking Writing Standard**
Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem, narrow or broaden the inquiry when appropriate, and synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WS 11-12.7 Anchor Standard

**6: Health and Safety Reading Standards for Science and Technical Subjects**
Determine the meaning of symbols, key words, and other domain-specific words and phrases as they are used in a specific scientific or technical context. RSTS 9-10 11-12.4 Anchor Standard

**7: Responsibility and Flexibility Speaking and Listening Standard**
Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly and persuasively. SLS 9-10 11-12.1 Anchor Standard

**8: Ethics and Legal Responsibilities Speaking and Listening Standard**
Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the work. SLS 11-12.1d Anchor Standard

**9: Leadership and Teamwork Speaking and Listening Standard**
Work with peers to promote civil, democratic discussions and decision making; set clear goals and deadlines; and establish individual roles as needed. SLS 11-12.1b Anchor Standard

**10: Technical Knowledge and Skills Writing Standard**
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. WS 11-12.6 Anchor Standard

**11: Demonstration and Application**
Demonstrate and apply the knowledge and skills contained in the industry-sector anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and the career technical student organization.