

**Santa Maria Joint Union High School District – Career Technical Education**

**AHC EL 105 PC PREVENTATIVE MAINTENANCE**

**INDUSTRY SECTOR:** Information and Communication Technologies Sector

**PATHWAY:** Networking

**CALPADS TITLE:** Introduction to Networking

**CALPADS CODE:** 8120

**HOURS:**

| Total | Classroom | Laboratory/CC/CVE |
|-------|-----------|-------------------|
| 80    | 32        | 48                |

| JOB TITLE                                 | O*NET CODE | JOB TITLE                                   | O*NET CODE |
|---|------------|---|------------|
| Information Security Engineers            | 15-1299.05 | Information Security Analysts               | 15-1212.00 |
| Database Administrators                   | 15-1242.00 | Computer Network Support Specialists        | 15-1231.00 |
| Computer and Information Systems Managers | 11-3021.00 | Network and Computer Systems Administrators | 15-1244.00 |

**COURSE DESCRIPTION:**

Necessary skills and information are needed to make an informed purchase and maintain, upgrade, and evaluate personal computer systems. The student will receive hands-on instruction for performing basic preventive maintenance and the installation of simple upgrades such as adding RAM, installing hard drives, sound cards, etc. Included is the study of soldering techniques, electronic part identification, and safety and system operation. Emphasis will be placed on the student's ability to keep personal computers running at their best performance levels.

**A-G APPROVAL:** No

**ARTICULATION:** None

**DUAL ENROLLMENT:**

| College              | Course Code |
|----------------------|-------------|
| Alan Hancock College | 8120        |

**PREREQUISITES:**

| Prerequisite |
|--------------|
| None         |

**METHODS OF INSTRUCTION**

- Direct instruction
- Group and individual applied projects
- Multimedia
- Demonstration
- Field trips
- Guest speakers

**STUDENT EVALUATION:**

- Student projects
- Written work
- Exams
- Observation record of student performance
- Completion of assignment

**INDUSTRY CERTIFICATION:**

- CompTia A+

**RECOMMENDED TEXTS:**

- Meyers, Mike Comp TIA A+ Certification Exam Guide Edition: 9th 2016
- Meyers, Mike Comp TIA A+ Guide to Managing and Troubleshooting PCs Edition: 5th 2016

**PROGRAM OF STUDY**

| Grade  | Fall | Spring | Year | Course Type  | Course Name                            |
|--------|------|--------|------|--------------|--|
| 11, 12 |      |        |      | Introductory | AHC EL 105 PC Preventative Maintenance |
| 11, 12 |      |        |      | Concentrator | AHC EL 106 Networking Essentials 1     |
| 11, 12 |      |        |      | Capstone     | AHC EL 107 Networking Essentials 2     |

| I. | STUDENT LEARNING OUTCOMES   | CR | Lab/<br>CC | Standards   |
|----|---|----|------------|---|
|    | <p>1. EL 105 SLO1 - Identify, remove, install, and configure all major components that comprise a personal computer system.</p> <p>2. EL 105 SLO2 - Perform preventative maintenance procedures (hardware and software) to personal computer systems.</p> <p>3. EL 105 SLO3 - Perform basic operating system and hardware configurations.</p> | 32 | 48         | <p><b>Academic:</b><br/>           LS: 11-12.1, 11-12.2, 11-12.3, 11-12.6<br/>           RSIT: 11-12.3, 11-12.7<br/>           WS: 11-12.1, 11-12.2, 11-12.6, 11-12.7, 11-12.8<br/>           N-Q: 1</p> <p><b>CTE Anchor:</b><br/>           Communications: 2.2, 2.3, 2.4, 2.7<br/>           Career Planning and Management: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.9<br/>           Technology: 4.1, 4.2, 4.3, 4.4, 4.6<br/>           Problem Solving and Critical Thinking: 5.1, 5.2, 5.3, 5.4, 5.5, 5.6<br/>           Health and Safety: 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11<br/>           Responsibility and Flexibility: 7.2, 7.3, 7.4, 7.5, 7.6, 7.7<br/>           Ethics and Legal Responsibilities: 8.1, 8.3, 8.4, 8.5, 8.6, 8.7<br/>           Leadership and Teamwork: 9.1, 9.2, 9.3, 9.6, 9.7<br/>           Technical Knowledge and Skills: 10.1, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.11, 10.12, 10.13, 10.14<br/>           Demonstration and Application: 11.1, 11.2, 11.3</p> <p><b>CTE Pathway:</b><br/>           B1.1, B1.2, B1.4, B1.6, B2.2, B3.1, B3.2, B4.1, B4.2, B5.1</p> |

**Entered by:**

District: Santa Maria Joint Union High School District  
Contact: Paul Robinson, Director of Career Technical Education  
Phone: 805.934.0330 x8701  
Email: [probinson@smjuhsd.org](mailto:probinson@smjuhsd.org)  
Date Created: 3/23/2023  
Date Printed: 3/23/2023