

**EL DORADO UNION HIGH SCHOOL DISTRICT  
Educational Services**

**Course of Study Information Page**

<b>Course Title:</b> Business/Technology - Technology Team II (#476)	
<b>Rationale:</b> A continuum of courses, including advanced classes in computer technology is needed. This course provides the opportunity for students to increase their technical skills through a year-long (one term) course. In addition, this course offers students the opportunity to continue to explore computer repair and maintenance as a possible career option.	
<b>Course Description:</b> This course is a continuation of Tech Team I, a lab/textbook course. In this course students will continue to improve their knowledge and skills in computer technology. Students will serve as the first response team to computer hardware and software repair needs for their schools. Students will do the initial diagnosis of the problem and then complete the repair or escalate the problem to the next level of response. Students will be required to keep records on all repairs, update the records for the school and monitor users. Students will serve as technical support in the computer labs when teachers bring classes in to work on projects. Students will be required to keep current on developments in the area of computer technology and participate in field trips as available to businesses in the field.	
<b>How Does This Course Align With or Meet State and District Content Standards?</b> The currently adopted District Technology Standards support this course (See El Dorado County Technology Competencies: Grades 9-12). The National Technology Standards from ISTE also support this type of course. Further, the District's Strategic Plan supports the integration of School-to-Career components within courses of study (See Focus Group - School-to-Career). Finally, this course continues to enhance students' opportunities for employment in the field.	
<b>Length of Course:</b>	One term at UMHS; One Semester at all other sites
<b>Grade Level:</b>	10 -12 at UMHS; 11-12 at all other sites
<b>Credit:</b> <input checked="" type="checkbox"/> Number of units <u>10 @ UMHS; 5 per Semester @ all other sites</u> <input type="checkbox"/> Meets graduation requirements <input type="checkbox"/> Request for UC "a-f" requirements <input type="checkbox"/> College Prep <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Vocational	
<b>Prerequisites:</b>	Computer Technology 473 (UMHS) or two semesters of Computer Technology (EDHS, PHS, ORHS, IHS) and completion of Tech Team I with a grade of "B" or better.
<b>Department(s):</b>	Business/Technology
<b>District Sites:</b>	All
<b>Board of Trustees Adoption Date:</b>	January 23, 2001
<b>Textbook(s)/Instructional Materials</b>	Dione McBride, <i>A Guide to Help Desk Technology, Tools &amp; Techniques</i> , Course Technology, 2000 (5 for each school); and Jean Andrews, <i>PC Troubleshooting Pocket Guide for Managing and Maintaining Your PC</i> , Course Technology, 2000 (16 for each school)
<b>Date Adopted by the Board of Trustees:</b>	May 8, 2001

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**Course Title: TECH TEAM II**

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UNIT #1 : Basic Components and System Designs

GOAL: Students will be able to identify, replace and service the various components of the computer.

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Identify the various components of typical computers configurations	Open the case of a computer and be able to correctly identify the components
Understand the different types of configurations and software needed to support those configurations	Re-image a typical student computer and reload all the requisite drivers and software
Understand cabling and card configurations	Troubleshoot the IP connection for a computer
Understand the data distribution system at the school site	Correctly determine which side of the network a computer is based on the IP configuration
Find a Business Coach	Locate, with your instructor's help, a Business Coach to advise you during this class. Schedule regular meetings to review your portfolio

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UNIT #2 : Troubleshooting Basics

GOAL: Students will diagnose and solve basic computer problems

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Understand and use essential hand tools and test equipment	Open the computer case and successfully remove the video card
Use the correct safety procedures when working on a computer	Using a wrist strap students will ground themselves prior to removing components
Use a logical approach to isolate the problems	Start by checking connections and obvious component failures prior to opening the case and removing components
Be able to correctly configure the BIOS and CMOS	On start-up, set the preferences for device access
Understand system diagnosis tools	Regularly run scan disk and defrag on all computers to maximize their performance
Use error messages to diagnose common problems	Using the list of error message codes, isolate the problem and repair the computer

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UNIT #3 : Troubleshoot System Board Components

GOAL: Students will diagnose and repair errors pertaining to the system board

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Identify the make and model of a system board	Open the case and determine the make and model of a computer's system board
Identify the chipset of a computer	Open the case and determine the chipset for a computer
Identify the drivers need to maximize system board performance	Maintain records for each type of computer configuration that include the correct drivers and support software
Remove a motherboard and replace it	Open the computer case and successfully remove the components and then reinstall them
Identify power supply problems	Correctly identify power supply problems and replace a malfunctioning power supply
Identify hard drive problems	Replace a computer's hard drive
Meet with your Business Coach	Schedule regular meetings with your Business Coach to review your portfolio

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UNIT #4 : Upgrades

GOAL: Students will be able to upgrade computer systems

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Identify system deficiencies and shop for upgrades	Search the net and locate appropriate upgrades
Replace RAM, DRAM, RDRAM, etc.	Locate the correct slot and install additional memory

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UNIT #5: General Troubleshooting

GOAL: Students will diagnose, troubleshoot and maintain all the computers at the school

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Identify a systematic approach to troubleshooting repairs for printers, monitors, mice and keyboards	Discuss their successful techniques with the team
Demonstrate how to configure a computer from scratch	Open the box and correctly configure a student computer from scratch
Demonstrate how to maintain a computer lab and peripherals	Given an assigned lab, the students will install and maintain all the computers and peripherals and maintain records on all repairs

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UNIT #6 : Troubleshooting Storage Devices

GOAL: Students will troubleshoot and manage storage devices to optimize performance

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Identify different types of storage devices and correctly install them	Install an external zip drive
Identify the different techniques for recovering lost data	Using a software program, recover lost files
Install auxiliary hard drives and floppies	Determine the correct ribbon connections and install a slave hard drive



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UNIT #7 : Lab Management

GOAL: Students will manage a computer lab and communicate all activities to their clients and supervisors

OBJECTIVES	SUGGESTED ACTIVITIES
The student will:	
Document all repairs	Send an email message detailing repairs done to a particular computer
Maintain IP lists	Using a spreadsheet maintain records of all IP settings and ports in their computer lab
Detail each day's activities	Send an email detailing the activities and repairs they perform each day
Meet with your Business Coach	Schedule regular meetings with your Business Coach to review your portfolio