

# ILLINOIS VALLEY COMMUNITY COLLEGE



## Course Outline

**DIVISION: Career and Technical Programs**

**Course: CSP 2210 Advanced PC  
Troubleshooting and Repair**

Date: February 19, 2009

Credit Hours: 2

Prerequisite(s):

Delivery Method:

<input checked="" type="checkbox"/> Lecture	1 Contact Hours
<input type="checkbox"/> Seminar	0 Contact Hours
<input checked="" type="checkbox"/> Lab	2 Contact Hours
<input type="checkbox"/> Clinical	0 Contact Hours
<input type="checkbox"/> Online	
<input type="checkbox"/> Blended	

Offered:  Fall  Spring  Summer

IAI Equivalent –**Only for Transfer Courses**–go to <http://www.itransfer.org>:

### CATALOG DESCRIPTION:

This course covers the advanced maintenance of PC hardware and software repair. Heavy emphasis is on the lab activities where students will work in a “real time” environment fixing computer problems and adding and replacing computer parts from various PC vendors. Software problems will be addressed with multiple versions of operating systems and software packages.

## GENERAL EDUCATION GOALS ADDRESSED

*[See the last page of this form for more information.]*

### Upon completion of the course, the student will be able:

[Choose those goals that apply to this course. ]

- To apply analytical and problem solving skills to personal, social and professional issues and situations.
- To communicate orally and in writing, socially and interpersonally.
- To develop an awareness of the contributions made to civilization by the diverse cultures of the world.
- To understand and use contemporary technology effectively and to understand its impact on the individual and society.
- To work and study effectively both individually and in collaboration with others.
- To understand what it means to act ethically and responsibly as an individual in one's career and as a member of society.
- To develop and maintain a healthy lifestyle physically, mentally, and spiritually.
- To appreciate the ongoing values of learning, self-improvement, and career planning.

### EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

*[Outcomes related to course specific goals.]*

#### Upon completion of the course, the student will be able to:

1. Install, configure, and troubleshoot field replaceable modules for desktop systems.
2. Install, configure, and troubleshoot field replaceable modules for laptop systems.
3. Install, configure, and troubleshoot common IDE devices.
4. Install, configure, and troubleshoot common peripheral devices.
5. Determine the issues that must be considered when upgrading a PC.
6. Recognize common problems associated with each device and identify steps to isolate and troubleshoot the problems.
7. Practice PC preventive maintenance.
8. Install, configure and upgrade an operating system.
9. Perform common diagnosing and troubleshooting

### COURSE TOPICS AND CONTENT REQUIREMENTS:

Outcome 1 – Students will be able to install, configure, and troubleshoot field replaceable modules for desktop systems

Competency 1.1 – Students will understand what a field replaceable module is and does.

Competency 1.2 – Given a replacement scenario, students will be able to choose the appropriate procedures for adding and removing the device.

Outcome 2 – Students will be able to install, configure, and troubleshoot field replaceable modules for laptop systems.

Competency 2.1 – Students will understand what field replaceable modules are appropriate for laptops.

Competency 2.2 – Given a replacement scenario, students will be able to choose the appropriate procedures for adding and removing the device.

Outcome 3 – Students will be able to install, configure, and troubleshoot common IDE devices.

Competency 3.1 – Students will understand the proper procedures for installing and configuring common IDE devices.

Competency 3.2 – Students will be able to choose the appropriate installation or configuration sequences in given scenarios.

Outcome 4 – Students will be able to install, configure, and troubleshoot common peripheral devices.

Competency 4.1 – Students will understand what common peripheral devices are currently available for installation (such as digital cameras, PDAs, and wireless access).

Competency 4.2 – Students will be able to install, configure, and troubleshoot these peripheral devices.

Outcome 5 – Students will be able to determine the issues that must be considered when upgrading a PC.

Competency 5.1 – Students will understand issues such as legacy drivers, buy types and characteristics, and system/firmware limitations.

Outcome 6 – Students will be able to recognize common problems associated with each device and identify steps to isolate and troubleshoot the problems.

Competency 6.1 – Students will understand common problems associated with devices connected to the PCs and develop a personal troubleshooting strategy.

Outcome 7 – Students will be able to practice PC preventive maintenance.

Competency 7.1 – Students will identify various types of preventive maintenance measures, products and procedures and when and how to use them.

Competency 7.2 – Students will identify various safety measures and procedures and when/how to use them.

Competency 7.3 – Students will identify environmental protection measures and procedures and when/how to use them.

Outcome 8 – Students will be able to install, configure and upgrade an operating system

Competency 8.1 – Students will be able to differentiate the characteristics of the various Windows operating systems.

Competency 8.2 – Students will identify the major operating systems utilities, their purpose, location, and available switches.

Competency 8.3 – Students will be able to install, configure, and upgrade an operating system.

Outcome 9 – Students will be able to perform common diagnosing and troubleshooting.

Competency 9.1 – Students will be able to recognize and interpret the meaning of common error codes and startup messages and correct the problem.

Competency 9.2 – Students will be able to use common diagnostic utilities and tools.

Competency 9.3 – Students will recognize operational and usability problems and determine how to resolve them.

### **INSTRUCTIONAL METHODS:**

Lecture

Labs

Teacher demonstrations

Group work

Testing

Case study analysis

### **INSTRUCTIONAL MATERIALS:**

A+ Guide to Managing and Maintaining Your PC, Fifth Edition Andrews

Diagnostic Software

Internet access

### **STUDENT REQUIREMENTS AND METHODS OF EVALUATION:**

Develop an understanding and/or a comprehensive knowledge of the items listed as course content.

1. Read required material on the topic
2. Review material that was covered in the prerequisite course
3. Attend class on current topic
4. Work on PCs in lab setting
5. Complete all tests
6. Ask questions about any misunderstood area
7. Join in discussions and case studies analyses

### **Grading Scale**

A	90-100%
B	80-89%
C	70-79%
D	60-69%

## **OTHER REFERENCES**

Form Revised: 3/2/05