ELEC 88.82 Course Outline as of Fall 2017

CATALOG INFORMATION

Dept and Nbr: ELEC 88.82 Title: ADV COMPUTER HDR/A+
Full Title: Advanced Computer Hardware/A+
Last Reviewed: 9/19/2011

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.50	17.5	Lecture Scheduled	26.25
Minimum	1.50	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.50		Contact Total	26.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 52.50 Total Student Learning Hours: 78.75

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	ELEC 299.8

Catalog Description:
The theory and operation of individual peripheral devices and operating systems including hard drives, Windows 2000, Windows XP, I/O Devices, peripherals, multimedia and troubleshooting. Partitioning, formatting of hard drive. Clean installation of an operating system (OS). Fundamentals of networking. Basic diagnostic tests. Includes complete disassembly and reassembly of a personal computer (PC) by each student.

Prerequisites/Corequisites:
Course Completion or Current Enrollment in ELEC 88.81

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: The theory and operation of individual peripheral devices and operating systems including hard drives, Windows 2000, Windows XP, I/O Devices, peripherals, multimedia and troubleshooting. Partitioning, formatting of hard drive. Clean installation of an operating system (OS). Fundamentals of networking. Basic diagnostic tests. Includes complete disassembly and

reassembly of a personal computer (PC) by each student. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion or Current Enrollment in ELEC 88.81
Recommended:
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course the student will be able to:

1. Upgrade random access memory (RAM)
2. Inspect and evaluate individual peripheral devices
3. Identify networking systems and devices
4. Evaluate the operation of the computer, utilizing diagnostic tests
5. Partition and format a hard drive
6. Perform a clean installation of an operating system (OS)
7. Perform A+ Certification practice tests
8. Perform system component troubleshooting and repair

Note that repeating students will perform the above assignments under the conditions of new technology.

Topics and Scope:

I. Random access memory (RAM)
   A. upgrades
   B. installation
   C. troubleshooting
II. Hard drives
   A. File formats
   B. partitioning
   C. formatting
   D. installation
   E. maintenance

III. Supporting Windows OS
   A. clean install of an OS
   B. configuration
   C. troubleshooting
IV. Supporting Input/Output (I/O) Devices
   A. installation
   B. configuration
   C. troubleshooting
V. Multimedia and mass storage
   A. installation of sound and graphics cards
   B. configuration
   C. troubleshooting
VI. Network structure
   A. networking between systems
   B. networking between devices
VII. Diagnostic testing
   A. software systems and troubleshooting
   B. classification of tests
VIII. A+ Certification
   A. test preparation and general review of questions
   B. process for earning certification

Note that repeating students will perform the above assignments under the conditions of new technology.

Assignment:

1. 2-4 written repair log reports (1-3 pages in length)
2. 6-11 homework problem sets
3. 4-10 skill demonstration performance tests
4. 2-4 quizzes and one final exam

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Repair Log Reports	Writing 10 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems from text and course	Problem solving 15 - 25%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances	Skill Demonstrations 15 - 25%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion	Exams 40 - 50%

Other: Includes any assessment tools that do not logically fit into the above categories.

Class participation	Other Category 5 - 10%

Representative Textbooks and Materials:
A+ Guide to Managing and Maintaining Your PC, Sixth Edition, Comprehensive, by Jean Andrews 2007, Thompson Course Technology (classic)