



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2008-2009

NEXT REVIEW: 2013-2014

STATUS: A

COURSE TITLE: A+ Advanced

COMMON COURSE NUMBER: CTS2131C

CREDIT HOURS: 3

CONTACT HOUR BREAKDOWN

CLOCK HOURS: 3

Lecture: 40

Lab: 8

Clinic: 0

Other: 0

PREREQUISITE(S): CTS1133C (with a grade of 'C' or higher)

COREQUISITE(S):

PRE/COREQUISITE(S):

COURSE DESCRIPTION:

This course covers advanced concepts of computer hardware, including laptops and portable devices, and software. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also have a thorough understanding of wired and wireless network devices, security, safety, environmental issues, and professional communication. The skills developed by students who complete this course will prepare them for the CompTIA A+ IT Field technician (220-602), Remote Support Technician (220-603), and Bench Technician (220-604) exams.

UNIT TITLES

1. Advanced Personal Computer Components
2. Advanced Laptop and Portable Devices
3. Advanced Operating Systems
4. Advanced Printers and Scanners
5. Advanced Networks
6. Advanced Security
7. Advanced Safety and Environmental Issues
8. Advanced Communication and Professionalism



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EVALUATION:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

Evaluation instruments will include written and/or skills-based examinations and individual in-class and/or take-home assignments. Evaluation methods may also include group in-class and/or take-home assignments.

**** Complete the following only if course is seeking general education status ****

GENERAL EDUCATION Competencies and Skills*:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Write clearly and coherently	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: (highlight in green ALL that apply) (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental)	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

** General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

Common Course Number: CDA1302C

UNITS

Unit 1

General Outcome: Advanced Personal Computer Components

1.0 The student shall: fully understand the operations of a personal computer and be able to identify, install, configure and troubleshoot personal computer components.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 Install, configure, optimize, and upgrade personal computer components
- 1.2 Identify tools, diagnostic procedures, and troubleshooting techniques for personal computer components
- 1.3 Perform preventive maintenance of personal computer components



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Unit 2

General Outcome: Advanced Laptops and Portable Devices

2.0 The student shall: completely comprehend the operation of laptops and portable devices and be able to identify, install, configure and troubleshoot laptops and portable devices.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1** Identify fundamental principles of using laptops and portable devices
- 2.2** Install, configure, optimize, and upgrade laptops and portable devices
- 2.3** Identify tools, diagnostic procedures, and troubleshooting techniques for laptops and portable devices
- 2.4** Use tools, diagnostic procedures, and troubleshooting techniques for laptops and portable devices



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Unit 3

General Outcome: Advanced Operating Systems

- 3.0 The student shall:** understand in depth the purpose and use of an operating system and be able to install, configure, optimize, upgrade and troubleshoot an operating system.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1** Identify the fundamental principles of using operating systems
- 3.2** Install, configure, optimize, and upgrade operating systems
- 3.3** Identify tools, diagnostic procedures, and troubleshooting techniques for operating systems
- 3.4** Perform preventive maintenance for operating systems



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Unit 4

General Outcome: Advanced Printers and Scanners

4.0 The student shall: have an inclusive understanding of printers and scanners and be able to install, configure, optimize, and upgrade printers and scanners.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1** Identify the fundamental principles of using printers and scanners
- 4.2** Install, configure, optimize, and upgrade printers and scanner
- 4.3** Identify tools and diagnostic procedures to troubleshooting printers and scanners
- 4.4** Perform preventive maintenance of printers and scanners



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Unit 5

General Outcome: Advanced Networks

5.0 The student shall: have a broad knowledge of networking and be able to install configure, optimize, and upgrade network components.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1** Identify the fundamental principles or networks
- 5.2** Install, configure, optimize, and upgrade networks
- 5.3** Identify tools, diagnostic procedures, and troubleshooting techniques for networks
- 5.4** Use tools and diagnostic procedures to troubleshoot network problems
- 5.5** Perform preventive maintenance of networks including securing and protecting network cabling



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Unit 6

General Outcome: Advanced Security

6.0 The student shall: have general knowledge of security concepts and be able to implement basic security practices.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1** Identify the fundamentals and principles of security
- 6.2** Install, configure, upgrade, and optimize security
- 6.3** Identify tool, diagnostic procedures, and troubleshooting techniques for security
- 6.4** Perform preventive maintenance for security
- 6.5** Identify the names, purposes, and characteristics of physical security devices and processes
- 6.6** Install hardware security



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Unit 7

General Outcome: Advanced Safety and Environmental Issues

7.0 The student shall: have an expansive understanding of safety and environmental issues and procedures, and be able to identify potential hazards.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

7.1 Identify potential hazards and proper safety procedures including power supply, display devices, and environment (e.g. trip, liquid, situational, atmospheric hazards and high-voltage and moving equipment)



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Unit 8

General Outcome: Advanced Communication and Professionalism

8.0 The student shall: be able to communicate on a professional level and behave in a professional manner in regards to privacy, confidentiality and respect.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 8.1** Use good communication skills including listening and tact / discretion, when communicating with customers and colleagues
- 8.2** Use job-related professional behavior including notation of privacy, confidentiality and respect for the customer and customers' property