

Bay de Noc Community College

Course Outline

Course Number & Name

Enter the course number and name

CN 150

A+ Computer Maintenance

Credit/Contact Hours

Enter the credit and contact hours.

4/6

Course Description

Enter the course/catalog description

This course is an introduction to Personal Computer hardware and software. Using a theoretical and hands-on approach, students will learn the skills needed to install, configure, and service hardware, operating systems, and applications. In addition, students will learn to configure stand alone or networked computers for reliability and security. This course maps to CompTIA A+ objectives.

Primary Learning Objectives

List the specific competencies, concepts, issues, or skills that a student needs to understand or master as part of the course. These outcomes may involve knowledge (cognitive), skills (behavioral), or attitudes (affective behavior) that provide evidence that learning has occurred at a specified level of competency as a result of the course.

Define important terms related to MS Windows, Unix/Linux, and Mac operating systems

Load operating systems, configure for networking, attach to printer, share documents.

Demonstrate knowledge of how to secure an OS against virus and security attacks.

Explain the operation of I/O devices, both historical and state of the art.

Explain the differences in motherboard types – RAM, CPU, bus types, etc.

Explain the characteristics of current and legacy microprocessors.

Explain the interfaces and storage methods of magnetic and optical devices.

Demonstrate systematic approach to troubleshooting.

Demonstrate proficiency in troubleshooting from remote (phone, email, remote desktop)

Textbooks and/or Materials

List the required and/or recommended textbooks and materials in this section. Include any reference or auxiliary materials that may be needed such as lab equipment, testing material, journals, notebooks, dictionaries, online content, etc.

A+ Guide to Managing and Maintaining Your PC by Jean Andrews

Tentative Course Schedule

Using the outline format provided, enter the suggested schedule for course content divided over a 15-week semester. Courses that are shorter in length should be divided over the appropriate time period.

Week	Subject/Topic Area(s)
1	How hardware and software work together.
2	The fundamentals of Operating Systems
3	Form factors and power supplies.
4	Motherboards, processors, and chipsets
5	Memory and primary storage.
6	Hard drives and secondary storage.
7	Installing and supporting peripheral devices.
8	Multimedia and mass storage.
9	Supporting users and their data.
10	Proper maintenance of operating systems.
11	Personal Computers in a network.
12	Personal Computers on the Internet.
13	Notebooks, tablets, PDAs, and smartphones.
14	Printers and scanners.
15	The Professional PC Technician

Course Requirements and Evaluation

Specific course requirements and types of evaluation are at the discretion of the instructor at the time the course is being offered. However, to provide consistency among sections of courses, actual evaluation methods and course requirements may be provided as part of the proposal. In addition, a percentage parameter may be given for a particular requirement; for example, Presentation 50-60%; Final Exam 15%; Portfolio 25%; etc.

Evaluation will be a combination of objective (proctored and take home tests) and subjective (labs and discussions, Socratic) methods. Student will be responsible for performing all designated work above and will be responsible for scheduling lab assistance with the Instructor.

Suggested Methods of Instruction

Instructional methods will vary considerably by instructor; however this section is intended to provide guidelines as to the type of methods that would be appropriate for the course. These methods may overlap with the requirements and evaluation methods listed in the previous section. However, this list will include methods by which course content will be delivered and enhanced but not necessarily directly evaluated. These might include but are not limited to: discussion, guest speakers, field trips, lectures, demonstrations, service learning, etc.

Instructor uses module based assignments to instruct the course. Modules are specific to the course and may be conducted in the lab or hybrid format.