Computer Applications

This course is designed to develop computer technology skills. Students will use a variety of computer software and hardware tools and features of an electronic information network. Students will explore the social, business, and ethical issues of using computer technology. The students will develop skills that will assist them with efficient production of word processing documents, spreadsheets, databases, and presentations.

Recommended Prerequisite or concurrent: Keyboarding

Suggested Prerequisite or concurrent with: Document Formatting

Grades: 9-10

Recommended Credit 1 Credit

Standard 1.0

> The student will develop and apply concepts related to human relations, safety, career development, communications, and leadership skills for a global workplace.

Standard 2.0

> The student will examine new and emerging technologies and evaluate the impact and applications of computers in society.

Standard 3.0

> The student will apply skills appropriate to the computer operating system and the keyboard.

Standard 4.0

> Apply mailability standards to all software output.

Standard 5.0

> The student will accurately create a variety of word processing documents.

Standard 6.0

> The student will create and design spreadsheets to produce and manipulate alpha/numeric data.

Standard 7.0

> The student will develop database skills to organize and maintain information.

Standard 8.0

> The student will design a multimedia presentation.

Standard 9.0

> The student will examine network, hardware, software, and programming applications.

Course Description

This course is designed to develop computer technology skills. Students will use a variety of computer software and hardware tools and features of an electronic information network. Students will explore the social, business, and ethical issues of using computer technology. The students will develop skills that will assist them with efficient production of word processing documents, spreadsheets, databases, and presentations. *(This course requires a computerized workstation for each student with operating system, word processing, database, spreadsheet, presentation, and networking resident software.)*

Standard 1.0

The student will develop and apply concepts related to human relations, safety, career development, communications, and leadership skills for a global workplace.

Learning Expectations

The student will:

1.1 Demonstrate sensitivity to personal, societal, corporate, and governmental responsibility to community and global issues.

1.2 Demonstrate the interpersonal, teamwork, and leadership skills needed to function in diverse business settings, including the global marketplace.

1.3 Communicate effectively as writers, listeners, and speakers in diverse social and business settings.

1.4 Apply the critical-thinking and soft skills needed to function in students' multiple roles as citizens, consumers, workers, managers, business owners, and directors of their own futures.

1.5 Analyze and follow policies for managing legal and ethical issues in organizations and in a technology-based society.

1.6 Investigate the life-long learning skills that foster flexible career paths and confidence in adapting to a workplace that demands constant retooling.

1.7 Assess personal skills, abilities, aptitudes, and personal strengths and weaknesses as they relate to career exploration and apply knowledge gained from individual assessment to research and develop an individual career plan.

1.8 Examine the goals and principles of a professional organization. (Ex. Computer Science Club, BETA Club, FBLA)

1.9 Investigates online and office safety procedures and passes a written safety examination with 100% accuracy.

1.10   Demonstrates parliamentary procedure through office staff/chapter organizational meetings.
1.11   Apply appropriate typography concepts to industry documents.

Student Performance Indicator: Evidence Standard Is Met

The student:

➢   Develops a presentation, applying typography guidelines, that illustrates ethical and legal behavior in written and spoken portions of the presentation, and recognizes the implications of violating federal and state laws related to the use of technology and copyrighted materials.
➢   Models and role-plays examples of behavioral expectations in the workplace, including soft skills and team building.
➢   Demonstrates skills necessary for safety and environmental protection in the workplace and passes a written safety exam with 100% accuracy.
➢   Develops a presentation, applying typography guidelines illustrating ethical behavior in what are written, spoken or presented and legal issues recognizing the implications of violating federal and state laws including the use of technology and copyrighted materials.
➢   Illustrates modeling and role playing of examples of behavioral expectations in the workplace including soft skills and team building.
➢   Demonstrates parliamentary procedure through office staff/chapter organizational meetings.
➢   Participates in professional development leadership activities.
  ➢   Creates a design and lays out a membership brochure to promote membership.
  ➢   Creates a design and lays out a flyer to promote the local activities of the charitable organization such as the Red Cross.
➢   Demonstrates progress toward developing skills and behaviors through portfolios and reflection.

Sample Performance Task

> ➤ Design and produce a team project on legal and ethical issues that includes issues and penalties for plagiarism, copied text that does not require permission, and copied data that requires permission and the process used in obtaining permission. Obtain formal permission for use of quotations, art form, design, music, and photographs. Develop and present a total team project utilizing various technology components and appropriate typography concepts.
> ➤ Use the Internet to research health and safety issues in a computer work environment.
> ➤ Compose and assemble a safety manual using appropriate typography concepts. Develop a presentation on right-to-know laws and any other laws required for safety.

Standard 2.0

> **The student will examine new and emerging technologies and evaluate the impact and applications of computers in society.**

Learning Expectations

The student will:

2.1 Analyze and explore the use and impact of computer technology on individual lives, employment opportunities, and various industries such as business, recreation, medical, education and entertainment.

2.2 Explore emerging computer technologies and forecast future trends.

2.3 Analyze different types of computer applications and the types of hardware and software needed to complete each.

Student Performance Indicators: Evidence Standard Is Met

The student:

➢ Compares and contrasts the benefits and limitations of computer technology in various industries.

➢ Researches and reports on current trends and emerging technologies through the use of videos, Internet, magazines, newspapers, etc.

➢ Connects potential employment opportunities to emerging technologies.

Sample Performance Task

➢ In assigned work groups, research and identify ways technology affects each team member.

➢ Each student will research and analyze an emerging technology and present it to the class.

Standard 3.0

> **The student will apply skills appropriate to the computer operating system and the keyboard.**

The student will:

3.1 Operate the alphabetic, numeric, and special characters on the keyboard using the touch system.

3.2 Demonstrate speed and accuracy using the touch system of keying by attaining a minimum of 35 NWAM on a two-minute timed writing.

3.3 Apply operating system commands in the use of computer components and functions.

3.4 Demonstrate proficiency in the care and operation of computer technology.

Student Performance Indicator: Evidence Standard Is Met

The student:

> ➢ Applies correct body and hand position for keyboarding.
> ➢ Uses the touch system to reach the alphabetic, numeric and special characters keys.
> ➢ Keys a minimum of 35 NWAM on a two-minute timed writing.
> ➢ Demonstrates the features of the operating system.
> ➢ Utilizes the operating system environment to:
>> ➢ Analyze the types of files shown in a directory.
>> ➢ Create directories (folders) and sub directories.
>> ➢ Rename existing files and directories (folders).
>> ➢ Save or move files to a variety of storage media.

Sample Performance Task

> ➢ Students will complete a one-minute timed writing achieving a minimum of 35 NWAM.
> ➢ The student will use components and functions of the resident operating system.

Standard 4.0

Apply mailability standards to all software output.

Learning Expectations

4.1   Apply appropriate capitalization, punctuation, number expression, and grammar concepts to produce mailable documents.
4.2   Revise and critique documents using proofreading and editing marks.

Student Performance Indicator: Evidence Standard is Met

The student:

- Applies language arts skills to all documents.
- Demonstrates document productivity by using appropriate proofreading and editing skills.
- Inputs, edits, and formats documents for a specific communication project.

Sample Performance Task

- Students will key and revise a document containing grammatical, punctuation, spelling, and number expression errors indicated by proofreader marks.

Standard 5.0

**The student will create a variety of word processing documents.
Learning Expectations**

The student will:

5.1   Differentiate between the functions and terminology of word
       processing software.
5.2   Apply accurate formatting skills to create and revise a variety of
       academic and business documents. *(CLE 3101.1.2, CLE 3102.1.2,
       CLE 3102.4.2, CLE 3108.1.2, CLE 3108.4.7, CLE 3108.4.8)*

Student Performance Indicators: Evidence Standard Is Met

The student:

➢   Creates a variety of business documents (such as)
   ➢   Memo
   ➢   Letters
   ➢   Agenda
   ➢   News releases
   ➢   Minutes
   ➢   Tables (Tabs and Table Feature)
   ➢   Business Reports
   ➢   Academic Reports (MLA, APA or other accepted format)
➢   Designs documents applying typography concepts.
➢   Inputs and formats documents for a specific communication project.
➢   Inserts and formats graphics.
➢   Demonstrates document productivity by using appropriate
     proofreading skills and editing skills.

Sample Performance Task

➢   The student will input and format a variety of documents for a specific
     communications project.

Standard 6.0

> The student will create and design spreadsheets to produce and manipulate alpha/numeric data.

Learning Expectations

The student will:

6.1   Compare and contrast the uses of word processing and spreadsheet software.

6.2   Differentiate between the functions and terminology of spreadsheet software.

6.3   Analyze and construct functions and formulas. *(CLE 3102.1.7, CLE 3102.2.1, CLE 3102.3.6, CLE 3102.3.1, CLE 3102.3.5, CLE 3102.3.6, CLE 3102.3.9, CLE 3103.1.7, CLE 3103.2.3, CLE 3108.1.7,)*

6.4   Create charts and graphs. *(CLE 3102.1.2, CLE 3102.5.1, CLE 3102.5.2, CLE 3101.1.2, CLE 3103.2.4, CLE 3103.3.2, CLE 3103.3.5, CLE 3103.5.1, CLE 3103.5.2, CLE 3103.5.3, CLE 3103.5.4, CLE 3108.1.2, CLE 3108.2.3, CLE 3108.5.1)*

Student Performance Indicators: Evidence Standard Is Met

The student:

➢ Demonstrates the functions and terminology of spreadsheet software.

➢ Creates spreadsheets using appropriate inputting, editing, and formatting skills.
  ➢ Develops and applies functions and formulas.
  ➢ Incorporates graphic and chart elements.
  ➢ Sets up print specifications and prints.

Sample Performance Task

➢ Divide the class into groups of two and have them create a spreadsheet with provided information concerning an organization's fundraising activities.

Standard 7.0

The student will develop database skills to organize and maintain information.

Learning Expectations

The student will:

7.1   Compare and contrast the uses of spreadsheet and database software.
7.2   Differentiate between the functions and terminology of database software.
7.3   Design and create a database. (*CLE 3103.5.2*)
7.4   Formulate simple queries. *(CLE 3102.1.2, CLE 3101.1.2, CLE 3108.1.2)*
7.5   Create a database report.

Student Performance Indicators: Evidence Standard Is Met

The student:

➢   Constructs databases using appropriate inputting, formatting, and editing skills.
➢   Searches and sorts a database for specific information.
➢   Creates and formats database reports.
➢   Inputs, sorts, searches, edits, and updates data.

Sample Performance Task

➢   The student will design a database given specific contact demographic data for a fundraising activity.

Standard 8.0

The student will design a multimedia presentation.

Learning Expectations

The student will:

8.1   Differentiate between the functions and terminology of presentation software.
8.2   Analyze the basic concepts of multimedia presentation design.
8.3   Design, create, and present a multimedia presentation to a specific audience. (*CLE 3103.5.2)*

Student Performance Indicators: Evidence Standard Is Met

The student:

➢   Creates a ten-slide multimedia presentation applying inputting, formatting, and editing skills.
➢   Inserts and/or scans necessary graphics, digital clips, and/or video and audio clips within the framework of copyright laws.
➢   Prints an outline and a copy of the audience handout with given number of frames to a page.
➢   Delivers the presentation to a specific audience.

Sample Performance Task

➢   The student will design an interactive multimedia presentation for the recruitment of a co-curriculum student organization such as a computer science chapter or Future Business Leaders of America. The presentation is designed for and presented to the 7th and 8th grade assembly.

Standard 9.0

The student will examine network, hardware, software, and applications.

Learning Expectations

The student will:

9.1   Differentiate between the functions and terminology of networks, hardware, and software.

9.2   Distinguish between the Internet, intranet, and the World Wide Web.

Student Performance Indicators: Evidence Standard is Met

The student:

➢   Appraises the basic components of communications systems.

➢   Diagrams a communications system incorporating various hardware devices.

➢   Practices proper Internet etiquette, security, privacy, and copyright laws.

➢   Utilizes the Internet/intranet for electronic communication and research.

➢   Evaluates the validity of information received through the Internet.

➢   Complies with all security, privacy, and copyright laws and regulations.

Sample Performance Task

➢   Using the drawing feature of software, students will create a diagram representing a communication system, WAN or LAN network.