COFFEYVILLE COMMUNITY COLLEGE

COMP-161

COURSE SYLLABUS

FOR

COMPUTER INFORMATION SYSTEMS

FALL 2004

KENDALL PAYNE
INSTRUCTOR

MATH SCIENCE DIVISION

COURSE #: COMP-161	**COURSE TITLE:** Computer Information Systems
CLASS TIME:	9:10 – 10:10 AM TRF
CREDIT HOURS:	3 Credit Hours
INSTRUCTOR:	Kendall Payne
OFFICE LOCATION:	Room 119, Weinberg Hall
OFFICE HOURS:	Posted on office door
TELEPHONE:	251-7700 Ext. 2126
E-MAIL:	kendallp@coffeyville.edu kpayne12@cox.net E-mail both addresses
PREREQUISITES:	None
REQUIRED TEXT AND MATERIALS:	COMPUTERS: Tools for an Information Age H. L. Capron 4th Edition, Benjamin/Cummings Publishing Company, 1996
COURSE DESCRIPTION:	This is a theory course designed to introduce the students to the history, terminology and applications of computers. The student will learn the fundamentals of Windows along with many of the application software programs including spreadsheets, word processing, databases and presentation software. The fundamentals of computer programming will also be studied as well as the different programming languages currently being used in industry.

EXPECTED LEARNER OUTCOMES

1. Gain an understanding of the terminology used in the computer field.

2. Learn the different parts of the computer and understand how they work together.

3. Learn and understand what a computer virus is; know some of the most commonly found computer viruses and know ways to prevent computer viruses.

4. Learn and understand how networks operate and know the four different types of networks used.

5. Study the history and evolution of computers and key people involved in the development of computers.

6. Learn and understand how operating systems work and develop an understanding of the different operating system commands.

7. Learn and understand what WINDOWS is, the advantages of using WINDOWS versus MS-DOS, the terminology associated with WINDOWS and know why people are using WINDOWS.

8. Learn how to do word processing, understand what word processing is used for and learn the concepts and terminology associated with word processing.

9. Learn how to enter spreadsheets using spreadsheet software, understand what spreadsheets are used for and learn the concepts and terminology associated with spreadsheets.

10. Become familiar with database concepts, the types of databases that are available, learn how to create and enter a database file and how to do queries with a database.

11. Learn and understand the concepts associated with computer programming and know the steps involved in the structured programming process.

12. Become familiar with the different programming languages that are currently being used and know what applications they are being used for.

13. Learn about the different careers available in the computer industry today.

14. Learn the different number systems used and be able to convert from one number system to another.

15. Learn about presentation software and be able to create a presentation on the computer using presentation software.

LEARNING TASKS AND ACTIVITIES

8/17	Introduction, Pre-test
8/19	Parts of the computer
8/24	Computer memory, CPUs
8/26	Input and output devices
8/27	Auxiliary storage
8/31	Data communications
9/2	**EXAMINATION #1**
9/7	Computer viruses
9/9	Internet
9/10	Computer history
9/14	Operating Systems
9/16	More on operating systems
9/21	Windows
9/23	Windows Explorer
9/24	**EXAMINATION #2**
9/28	Word processing concepts
9/30	More on word-processing
10/5	Spreadsheet concepts
10/7	Data management
10/8	Database concepts
10/12	Data relationships, types of databases
10/14	Queries with databases
10/19	Presentation
10/21	**EXAMINATION #3**
10/22	Computer programming fundamentals
10/26	More on computer programming
10/28	Structured programming process
11/2	Programming languages
11/4	Computer programming in BASIC
11/5	Computer programming in BASIC
11/9	**EXAMINATION #4**
11/11	Number systems
11/16	More on number systems
11/18	Number system conversions
11/19	More on number system conversions
11/23	HTML
11/30	More on HTML
12/2	**EXAMINATION #5**
12/7	Integration
12/8	**FINAL EXAM**

ASSESSMENT OF OUTCOMES

The student will be assessed in three areas:

A. Cognitive:

Knowledge and understanding of the materials. Knowledge of all areas of material will be assessed through exams which are mainly objective in nature(Multiple Choice and Matching questions), with additional short answer/essay questions. (40% of grade)

B. Metacognition:

Each student will be required to show how they can incorporate the cognitive aspects of this material attained from the text and lectures by answering study guide questions. These questions will represent the different levels of learning. These will be presented in written and verbal form. (40% of grade)

C. Affective

Attendance, attitude, assignments and participation in classroom discussion and exercises. (20% of grade)

GRADING POLICY

Semester grades will be based upon the following:

1. Unit tests
2. Pop quizzes
3. Homework
4. Final exam

UNIT TESTS

There will be five unit tests. Each test will be worth 100 points. As a student you are required to be present for all exams. If you cannot be present for an exam, you must notify me IN ADVANCE. If you are not present for an exam, and I have not heard from you by the day of the exam, you will not be allowed to make up the exam. A '0' will be placed by your name in the grade book for that exam. The dates of the exams are listed on the next page.

POP QUIZZES

Occasionally, I will give pop quizzes at the beginning of class. Each quiz will be worth 10 to 20 points. These quizzes will be unannounced. If you miss class that day with an unexcused absence, you will not be allowed to make up the quiz.

HOMEWORK

You will be given homework to do nearly every class period. The homework will consist of both reading and written assignments. On some days, I will pick up the homework. On the other days, we will go over the homework in class. Homework exercises will be 20 to 40 points apiece. Each assignment will have a due date. Each assignment must be turned in at the beginning of class on the day that it is due. Any assignment not turned in at the beginning of class WILL NOT BE ACCEPTED.

FINAL EXAM

The final exam will be comprehensive and will be worth 100 points. Your final exam is on Wednesday, December 8, 2004 from 10:00 – 11:40 AM. All students must take the final exam on this date at this time. The final will not be given at any other time. NO EXCEPTIONS!!

GRADING SCALE

A …….. 90 – 100%
B …….. 80 – 89%
C …….. 70 – 79%
D …….. 60 – 69%
F …….. 0 – 59%

5 exams (@100 points) …….. 500 points
Homework/pop quizzes …….. 600 points
Final exam ……..100 points
TOTAL POINTS .....……1200 points

EXAM DATES

Examination 1 …….. September 2, 2004
Examination 2 …….. September 24, 2004
Examination 3 …….. October 21, 2004
Examination 4 …….. November 9, 2004
Examination 5 …….. December 2, 2004

Final Exam ……December 8, 2004

INCOMPLETES

Incomplete grades for the semester will be given in case of emergencies and only by mutual consent of the student and the instructor.

ATTENDANCE

Each student is required to attend every class session. Only in the event of illness or an emergency will you be excused from class. All other absences will be classified as unexcused absences. In event of illness or emergency, you must notify me personally. My phone number is 251-7700, Ext. 2126. If you are not in class and I have not heard from you by the end of that day, you will be given an unexcused absence.

A summary of excused and unexcused absences is listed below:

EXCUSED ABSENCES:
Illness
Emergency(Personal or family related)
Participation in a school activity or sporting event

For those students that have to miss class due to school related activities(sports, music, etc), these absences will not count toward the three excused absences provided that their exams and/or homework are made up **prior** to missing class.

NOTE: Each student is allowed only three excused absences. After the third excused absence, all absences become unexcused absences.

For excused absences, it is your responsibility to get in touch with me to make up any tests and/or homework. Any tests and/or homework that need to be made up must be done by the next class period. After the second excused absence, no tests and/or homework can be made up.

Those students that must miss class because of a school related activity must make up any exams and homework they will miss before the day they are going to miss class.

The instructor must validate all excused absences.

UNEXCUSED ABSENCES:
All other absences

For unexcused absences, you will not be allowed to make up the work that you missed. THIS INCLUDES EXAMS.

Competencies for COMPUTER INFORMATION SYSTEMS

1. GAIN AN UNDERSTANDING OF THE TERMINOLOGY USED IN THE COMPUTER FIELD.

   A. State in writing the three characteristics listed below necessary for a device to be considered a computer.

      1) The machine must be electronic
      2) The machine must have stored memory
      3) The machine must be able to process information

   B. State in writing the different examples of ways people actually come in contact with computers.

   C. State in writing the different sizes of computers by name and be able to describe characteristics and uses of each different size of computer.

2. LEARN THE DIFFERENT PARTS OF THE COMPUTER AND UNDERSTAND HOW THEY WORK TOGETHER.

   A. State in writing the five main parts of the computer listed below and be able to describe in detail how each part works and what it's function is.

      1) Input devices
      2) Output devices
      3) CPU
      4) Memory
      5) Screen

   B. State in writing and be able to explain how the different components of the computer work together to give one a functioning system.

3. LEARN AND UNDERSTAND WHAT A COMPUTER VIRUS IS; KNOW SOME OF THE MOST COMMONLY FOUND COMPUTER VIRUSES AND KNOW WAYS TO PREVENT COMPUTER VIRUSES.

A. State in writing what a computer virus is.

B. State in writing some of the most commonly known computer viruses.

C. State in writing ways one can prevent a virus from attacking his computer.

4. LEARN AND UNDERSTAND HOW NETWORKS OPERATE AND KNOW THE FOUR DIFFERENT TYPES OF NETWORKS USED.

A. State in writing the definition of the term NETWORK.

B. State in writing and give examples of the four different types of networks listed below.

1) Star
2) Hierarchical
3) Bus
4) Ring

C. State in writing the difference between a LOCAL AREA NETWORK and a WIDE AREA NETWORK.

D. State in writing what the internet is and some of the different uses of the internet.

5. STUDY THE HISTORY AND EVOLUTION OF COMPUTERS AND KEY PEOPLE INVOLVED IN THE DEVELOPMENT OF COMPUTERS.

A. Describe Charles Babbage's contribution to the development of early computers.

B. Sketch and explain the nature and utility of punched cards and the punched card machine as Joseph Jacquard and Herman Hollerith developed them respectively.

C. Outline the significant advances in computer technology from 1930 to the present.

D. Know the principle electronic components of computers from the first through the fourth generations of computers.

E. Describe what has happened in terms of the cost, size, speed and memory of computers as one progresses through the generations of computers from the first generation to the present.

6. LEARN AND UNDERSTAND HOW OPERATING SYSTEMS WORK AND DEVELOP AN UNDERSTANDING OF THE DIFFERENT OPERATING SYSTEM COMMANDS.

A. State in writing the meaning of the term, operating system. Define the terms that are shown below.

1) Supervisor
2) Warm/Cold boot
3) Command
4) Menu
5) Internal/External commands

B. State in writing the three different functions of the operating system and be able to give concrete examples.

C. State in writing the meaning of the abbreviation, MS-DOS and understand what MS-DOS is.

7. LEARN AND UNDERSTAND WHAT WINDOWS IS, THE ADVANTAGES OF USING WINDOWS VERSUS MS-DOS, THE TERMINOLOGY ASSOCIATED WITH WINDOWS AND KNOW WHY PEOPLE ARE USING WINDOWS.

A. Define the terms USER INTERFACE and GRAPHICAL USER INTERFACE.

B. Know the four different functions of the mouse.

1) Pointing
2) Clicking
3) Double Clicking
4) Dragging

C. State in writing the advantages of using windows.

D. State in writing what different parts of the window do and what their function is.

E. Learn how to use the WINDOWS EXPLORER to move and copy files from one folder to another

8. LEARN HOW TO DO WORD PROCESSING, UNDERSTAND WHAT WORD PROCESSING IS USED FOR AND LEARN THE CONCEPTS AND TERMINOLOGY ASSOCIATED WITH WORD PROCESSING.

A. State in writing the meaning of the term “word processing” and the terms listed below.

1) Word-wrap
2) Editing
3) Search and replace
4) Block
5) Cut and paste
6) Copy and paste
7) Scrolling.

B. State in writing the advantages of using word processing over typing a document on a typewriter.

C. State in writing some of the most common uses for word processing.

D. Be able to enter, edit and print a document using word processing software.

9. LEARN HOW TO ENTER SPREADSHEETS USING SPREADSHEET SOFTWARE, UNDERSTAND WHAT SPREADSHEETS ARE USED FOR AND LEARN THE CONCEPTS AND TERMINOLOGY ASSOCIATED WITH SPREADSHEETS.

A. State in writing the meaning of the term spreadsheet, and the terms listed below.

1) Worksheet
2) Workbook
3) Macro
4) Cell
5) Function
6) Cell Address
7) Cell Pointer
8) Cell Range

B. State in writing the advantages of spreadsheets done on the computer versus those done by hand on paper.

C. State in writing and be able to enter in a spreadsheet on the computer the different types of information listed below.

1) Label
2) Value
3) Formula
4) Function

D. Be able to enter and print a spreadsheet using spreadsheet software.

10. BECOME FAMILIAR WITH DATABASE CONCEPTS, THE TYPES OF DATABASES THAT ARE AVAILABLE, LEARN HOW TO CREATE AND ENTER A DATABASE FILE AND HOW TO DO QUERIES WITH A DATABASE.

A. State in writing the meaning of the term DATABASE.

B. State in writing the difference between a FIELD, RECORD and a FILE and be able to give examples of each.

C. State in writing the difference between FILE MANAGEMENT SOFTWARE and DATABASE MANAGEMENT SOFTWARE and know the advantages and disadvantages of each.

D. State in writing and be able to give examples of the three different types of relationships listed below.

1) One-to-one
2) One-to-many
3) Many-to-many

E. State in writing the three types of databases listed below and know the advantages and disadvantages of each type of database.

1) Hierarchical
2) Network
3) Relational

F. Create a database on the computer.

1) Enter the structure for the database
2) Enter the records for the database

G. Use the computer to issue a query with a database file and be able to interpret the information that is returned from the query.

11. LEARN AND UNDERSTAND THE CONCEPTS ASSOCIATED WITH COMPUTER PROGRAMMING AND KNOW THE STEPS INVOLVED IN THE STRUCTURED PROGRAMMING PROCESS.

A. State in writing the meaning of the following terms listed below.

1) Computer Program
2) Algorithm
3) Pseudocode
4) Flowchart
5) Coding
6) Bug
7) Debugging
8) Testing
9) Source code
10) Object code

B. State in writing the five steps of the structured programming process and know what occurs in each step.

C. State in writing the difference between PROGRAMMING and CODING.

D. State in writing the three types of statements one can have in a computer program and be able to give examples of each type of statement.

1) Sequential
2) Conditional
3) Repetitive

E. Use the computer to implement computer programs in BASIC using the three types of programming statements.

12. BECOME FAMILIAR WITH THE DIFFERENT PROGRAMMING LANGUAGES THAT ARE CURRENTLY BEING USED AND KNOW WHAT APPLICATIONS THEY ARE BEING USED FOR.

A. Describe and give an example of each of the four generations of programming languages.

B. State in writing the features of each of the programming languages listed below.

1) Machine language
2) Assembly language
3) COBOL
4) Fortran
5) BASIC
6) Pascal
7) RPG
8) PL/1
9) C
10) C++
11) ADA
12) SQL
13) JAVA
14) Visual BASIC

C. State in writing two reasons why there are so many different programming languages.

13. LEARN ABOUT THE DIFFERENT CAREERS AVAILABLE IN THE COMPUTER INDUSTRY TODAY.

A. Describe some of the computer related jobs found in computer hardware and software firms.

B. Outline the educational opportunities available for those interested in a career in the computer field.

C. Describe the ways that computer professionals can keep up with the advances in the computer field.

14. LEARN THE DIFFERENT NUMBER SYSTEMS USED AND BE ABLE TO CONVERT FROM ONE NUMBER SYSTEM TO ANOTHER.

A. Solve problems converting from DECIMAL to BINARY
B. Solve problems converting from BINARY to DECIMAL
C. Solve problems converting from BINARY to OCTAL
D. Solve problems converting from OCTAL to BINARY
E. Solve problems converting from BINARY to HEXADECIMAL
F. Solve problems converting from HEXIDECIMAL to BINARY
G. Solve problems converting from DECIMAL to OCTAL
H. Solve problems converting from OCTAL to DECIMAL
I. Solve problems converting from DECIMAL to HEXADECIMAL
J. Solve problems converting from HEXADECIMAL to DECIMAL

15. LEARN ABOUT PRESENTATION SOFTWARE AND BE ABLE TO CREATE A PRESENTATION ON THE COMPUTER USING PRESENTATION SOFTWARE.

A. State in writing the advantages of using presentation software to prepare a presentation over using transparencies.

B. Create a presentation on the computer using presentation software.