CIS 105 Computer Literacy

Upon successful completion of this course, students will be able to:

Computing Fundamentals

1. Identify types of computers, how they process information and how individual computers interact with other computing systems and devices.
2. Identify the function of computer hardware components.
3. Identify how to maintain computer equipment and solve common problems relating to computer hardware.
4. Identify how software and hardware work together to perform computing tasks and how software is developed and upgraded.
5. Identify what an operating system is and how it works, and solve common problems related to operating systems.
6. Manipulate and control the Windows desktop, files and disks.
7. Identify how to change system settings, install and remove software.
8. Demonstrate ability to start and exit an application and utilize sources of online help.

Applications

1. Identify common on-screen elements of Windows applications, change application settings and manage files within an application
2. Perform common editing and formatting functions
3. Perform common printing functions
4. Demonstrate ability to format text and documents including the ability to use automatic formatting tools.
5. Demonstrate ability to insert, edit and format tables in a document.
6. Demonstrate ability to modify worksheet data and structure and format data in a worksheet.
7. Demonstrate ability to sort and manipulate data using formulas and functions and add and modify charts in a worksheet.
8. Demonstrate ability to create and format simple presentations
9. Identify network fundamentals and the benefits and risks of network computing.

Online Resources

1. Identify how to appropriately use an email application, including "netiquette".
2. Identify different types of information sources on the Internet.
3. Demonstrate ability to use a web browsing application.
4. Demonstrate ability to search the Internet for information.
5. Identify how computers are used in different areas of work, school and home.
6. Identify the risks of using computer hardware and software.
7. Identify how to use computers and the Internet safely, legally, ethically and responsibly.
CIS 116 Business Mathematics

Upon successful completion of this course students will be able to:

1. Demonstrate ability to work with whole numbers: adding, subtracting, multiplying, dividing
2. Demonstrate ability to work with fractions: adding, subtracting, multiplying, dividing
3. Demonstrate ability to work with decimals: adding, subtracting, multiplying, dividing
4. Demonstrate the ability to read and work with banking statements: checking and credit card
5. Demonstrate ability to solve for the unknown in basic linear equations and word problems
6. Demonstrate ability to work with percentage calculations: conversions with decimals and fractions
   and working with the portion formula
7. Demonstrate ability to compute a basic payroll: weekly/biweekly/semimonthly/monthly; hourly, salary, overtime, piecework, commissions; federal and state taxes
8. Demonstrate ability to compute simple interest and maturity value
9. Demonstrate ability to compute compound interest (future value) and present value
10. Demonstrate ability to compute the cost of installment buying (loans), paying installment loans
    early, and revolving credit cards
11. Demonstrate ability to compute the cost of home ownership: mortgages and amortization
12. Demonstrate ability to read, analyze, and interpret financial reports (balance sheet, income
    statement, trend and ratio analysis)
13. Demonstrate ability to analyzing and computing various depreciation options (straight-line, unit of
    production, sum of the year’s digits, declining balance, MARCS)
14. Demonstrate ability to analyze life, fire, and auto insurance options
15. Demonstrate ability to read and explain stock, bond, and mutual fund quotations
16. Demonstrate ability to compute basic business statistical values: mean, median, and mode
CIS 157 Introduction to Web Design

Upon successful completion of this course students will be able to:

1. Read, write, and edit code that complies with the World Wide Web Consortium’s standards to perform the following tasks:
   a. Create Web pages and external style sheets from scratch.
   b. Add style to Web pages using external CSS, including font styles, background images and colors, margins, padding, borders, and link and navigation styles.
   c. Create and use tables appropriately – for data – and describe why it is important to avoid using tables for layout.
   d. Create online forms.
   e. Create user friendly, CSS-styled navigation.
   f. Layout Web pages in two and three column layouts using CSS.
   g. Build, manage, and edit page links, external links, anchors/bookmarks, e-mail links and graphical links using absolute and relative file paths.
   h. Create Web pages that are user friendly and accessible to users with various disabilities.
2. Describe the importance of separating content from style through the use of semantic HTML code and external CSS.
3. Edit and optimize images for use on the Web.
4. Organize files and folders to ensure that a site is easy to update, maintain, and expand.
5. Transfer files to and from a Web server using FTP, including sites with multiple directories.
6. Demonstrate the basic concepts behind server side scripting for form handling.
7. Become familiar with a variety of Web authoring tools, including open source and commercial applications.
8. Use accepted folder and file naming conventions.
CIS 170 Programming Fundamentals

Upon successful completion of this course students will be able to:

1. Describe the underlying hardware and software architecture of the modern digital computer.
2. Describe the history of programming and the state of the art in modern programming languages (1 thru 4 GL)
3. Demonstrate ability to write, compile, and execute your own programs
4. Demonstrate ability to identify and correct syntax and logic errors
5. Demonstrate ability to document programs in a professional manner
6. Demonstrate ability to design a Graphical User Interface (GUI) window
7. Demonstrate ability to program response action items
8. Demonstrate the basic use of variables and their demands on computing resources
9. Demonstrate ability to code control statements and pseudo-code
10. Demonstrate ability to code logical operators and message dialogs
11. Demonstrate ability to code increment and decrement operators and while repetition statements
12. Demonstrate ability to code do...while repetition statements
13. Demonstrate ability to code and use specific formats such as $1.00 and dates
14. Demonstrate ability to code and use methods and event handling
CIS 235 Spreadsheet Concepts & Applications

Upon successful completion of this course students will be able to:

1. Design, create, and modify complex workbooks
2. Demonstrate the ability to change and reset default settings
3. Modify complex workbooks through the use of formatting, changes in layout, and changes to formulas
4. Demonstrate the ability to design and create workbooks with multiple sheets and summarization of multiple sheets
5. Demonstrate the ability to plan and develop templates
6. Demonstrate the ability to use built-in templates
7. Demonstrate the use of Pivot tables and charts
8. Demonstrate the use of filters and conditional formatting
9. Demonstrate the difference between linking and embedding
10. Demonstrate the ability to determine when to use either linking or embedding
11. Demonstrate the ability to record and run simple macros
12. Demonstrate the ability to make minor changes to simple macros
13. Interpret basic elements of the Visual Basic Editor
14. Demonstrate use of protecting worksheets
15. Demonstrate using Lookup functions
16. Demonstrate using IF functions and other common financial functions
17. Demonstrate the ability to create what-if analysis, save as scenarios, and switch between scenarios
18. Demonstrate the ability to use goal seek
19. Demonstrate the ability to use Solver
20. Demonstrate the ability to create one and two-variable data tables
21. Convert worksheet data into formats used on the Internet (i.e. HTML, XML, etc.)
22. Demonstrate the ability to use the Query Wizard
23. Demonstrate the ability to work collaboratively on a shared workbook
24. Import data into Excel from external database programs and the Web
25. Demonstrate creating web queries and using hyperlinks
26. Demonstrate the ability to troubleshoot complex spreadsheet problems
CIS 240 Database Concepts and Applications

Upon successful completion of this course students will be able to:

1. Describe the difference between data and information.
2. Identify and describe the major components of a relational database.
3. Define major database terminology.
4. Identify and describe each type of key used in a database.
5. State the function of referential integrity rules.
6. State and use the different types of relationships used in effective database design.
7. Create an entity-relationship diagram of a relational database.
8. Identify different normal forms and be able to normalize complex datasets.
9. Create a relational database from start to finish, including tables, forms, queries, reports, and macros.
10. Define and be able to use inner and outer joins.
11. Use input masks and other field properties.
12. Create and use multi-criteria queries.
13. Create user friendly forms to ease the data entry process.

CIS 257 Advanced Web Site Design and Development

Upon successful completion of this course students will be able to:

1. Write W3C standards-compliant HTML to create consistent structure throughout a Web site
2. Identify and use consistent methods for adding style to a Web site through the use of Cascading Style Sheets
3. Create complex, table-free page layouts using CSS
4. Describe the purpose of the Document Object Model (DOM)
5. Use the DOM to implement JavaScript events
6. Dynamically alter Web page content with JavaScript
7. Validate form data using client side scripting
8. Describe how current Web technologies and standards enhance overall site structure and maintenance.
CIS 262 Professional Development

Upon successful completion of this course students will be able to:

1. Conduct a self-analysis of personal and professional traits that will lead to career success
2. Apply effective job-seeking skills including preparing a professional portfolio and completing a mock interview
3. Describe the elements of a professional image by applying the basics of good health practices, personal grooming, selecting a proper work wardrobe, and demonstrating proper etiquette
4. Discuss principles of effective time management and the importance of productivity
5. Discuss and apply human relations skills needed for professional success including identifying different value systems and their significance in understanding the behavior of others
6. Discuss legal issues relating to the work environment such as sexual harassment, employer/employee rights, privacy of information, substance abuse, and discrimination
7. Discuss personal and professional issues relating to the employee’s role in the work environment such as teamwork, negotiation, organizational ethics, corporate culture, dealing with change in the organization, mentoring, office politics, power, leadership, and networking
8. Formulate personal, educational, and professional career goals and develop a plan to accomplish those goals