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CSCI 105.03C: Computer Fluency

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Missoula College UM
Department of Applied Computing and Electronics

Course Number and Title: **CSCI 105 Computer Fluency**
Term: **Fall 2013**
Semester Credits: **3**
Prerequisites/Co-requisites:

For students needing basic computing skills, CAPP120 *Introduction to Computers* is recommended as a pre-requisite or co-requisite for this class. A proficiency test will be completed in the first week of the course to identify possible weaknesses in basic computing skills required to complete this course.

Faculty Contact Information

Faculty	Office	Office Hours
Steven (Steve) L. Stiff	GH08-I	M: 11:10 AM – 12:00 PM
Phone: 243-7913	MC East Campus	T, R: 1:10 PM – 2:00 PM
Email: steven.stiff@umontana.edu		or by appointment

Class Meeting Times and Final

Section 03C (CRN 72538)
Day, Time, and Location
MWF, 1:10pm – 2:00pm, AD17
Final Exam
W, 12/11/13, 1:10pm – 3:10pm, AD17

Section 04C (CRN 72539)
Day, Time, and Location
MWF, 8:10am – 9:00am, AD15
Final Exam
W, 12/11/13, 8:00am – 10:00am, AD15

Course Description

Introduces the skills and concepts of information technology, both from practical and a more theoretical point of view. During lectures and interactive computer labs, students will explore a wide range of digital and information technologies, including common PC applications, networking, databases, privacy, and security.

Course Overview

The term "computer literacy" has a connotation involving skills and competency in the use of basic computing applications. Examples of literacy include the use of a word processor or a web browser. Computer fluency, however, requires a deeper understanding and competency of concepts involving information technology.

"Fluency in information technology" was coined by a National Research Council Report led by University of Washington Professor and textbook author, Larry Snyder. Fluency with information technology requires three kinds of knowledge: contemporary skills, foundational concepts, and intellectual capabilities. Contemporary skills, that is, the ability to use today's computer applications, enable people to apply information technology immediately. In the present labor market, skills are an essential component of job readiness. Most importantly, skills provide a store of practical experience on which to build new competence. Foundational concepts, the basic principles and ideas of computers, networks, and information, underpin the technology. Concepts explain the how and why of information technology. They give insight into its opportunities and limitations, and provide the framework for understanding new information technology as it evolves. Intellectual capabilities, the ability to apply information technology in complex and sustained situations, encapsulate higher-level thinking in the context of information technology. Capabilities empower people to manipulate the medium to their advantage and to handle unintended and unexpected problems when they arise. The intellectual capabilities foster more abstract thinking about information and its manipulation.

Course Objectives

Upon completion of the course a students will:

- Demonstrate proficiency in the use of information technology, file management, and the ability to learn new software.
- Understand the basic operation of a computer, a local network, and the Internet
- Demonstrate proficiency in online learning and research.
- Identify security precautions for protecting personal information.
- Demonstrate concepts involving programming, digitizing, and encoding information.
- Develop general strategies to logically diagnose, troubleshoot, and solve technical problems.

Required Materials

- *Fluency in Information Technology, 5th Edition,* by Larry Snyder
  © 2013, ISBN-10: 1269087061, ISBN-13: 9781269087063
  NOTE: The customized text (*Custom Edition for CSCI 105 Computer Fluency, The University of Montana College of Technology*) taken from:
  Fluency with Information Technology: Skills, Concepts, and Capabilities, 5th Edition, by Lawrence Snyder, © 2013, ISBN-10: 0132828936, ISBN-13: 9780132828932
  (Either edition of the text can be used for this course)
- USB 2.0 Electronic Storage Device

Evaluation and Grading Criteria:

Assessment	
Assignments, quizzes, projects, etc.	35.0%
Laboratories	30.0%
Exams	35.0%
Attendance (Bonus)	2.0%

Grading Scale	
100% - 90%	A
90% - 80%	B
80% - 70%	C
70% - 60%	D

Course Policies

Online Component

Various components of the course will be delivered via UMOnline (**http://umonline.umt.edu/**) using the Moodle Course Management Software. It is the responsibility of the student to become familiar with and work in Moodle. Moodle training is also available through UMOnline.

Attendance

- Regular classroom attendance is expected and attendance is taken.
- Students more than 10 minutes late for class will not be given credit for attendance.

Assignments and Exams

- All assigned work is due at the assigned time on the assigned date.
- All exams are to be taken at the assigned time on the assigned date.
- **All late or missed work receives a score of 0**. Late work is accepted only in extraordinary circumstances, and is accepted and graded at the instructor's discretion.

Electronic Communication Devices Policy

- All electronic communication devices must be secured, muted, or tuned off prior to the start of class.
- Any use of an electronic communication device during an exam is considered cheating and will be handled at the instructor's discretion (refer to *Student Conduct*).
- Audio and/or video recording of class sessions is not permitted without prior approval of the instructor (refer to *Students with Disabilities*).

Student Conduct

- *All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or disciplinary sanction by the University.*
- *Student conduct is governed by the Student Conduct Code. All students need to be familiar with the Student Conduct Code. It is available for review or can be downloaded at* **http://life.umt.edu/vpsa/student_conduct.php**.

Students with Disabilities

- Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely manner. Please be prepared to provide me a copy of your *Letter of Verification* supplied by your *Disability Services for Students* (DSS) Coordinator for my records. Refer to **http://life.umt.edu/dss** or call **406-243-2243** (voice/text) for information regarding your rights.
- When requesting accommodations, please contact me after class or in my office to discuss your needs. This is done in order to maintain your privacy and minimize class disruptions.
- For students requesting examination accommodations, you must supply me the completed *Academic Support Center* (ASC) scheduling form for my signature at least 3 days prior to the scheduled test date (the ASC requires the signed form at least two days prior to testing). ASC contact information is available at **http://www.cte.umt.edu/academics/academicsupport/**.

Policies for Dropping and Adding Courses, Changing Sections, Grading, and Credit Status

- The University Policy for dropping courses or requesting grading/credit status changes can be found in the academic catalog or on the web at **http://www.umt.edu/catalog/acad/acadpolicy/default.html**. All students should be familiar with this policy.
- If you are having difficulty with the course for any reason and decide not to continue, please complete a drop or withdrawal form. A properly completed and approved drop or withdrawal form will prevent you from receiving a failing grade on your college transcript.
- Please note: if you are receiving financial aid, dropping or withdrawing from a course may affect your financial aid status.

Changes to Syllabus

NOTE: The instructor reserves the right to modify the syllabus and assignments as needed based on faculty, student, and/or environmental circumstances. If changes are made to the syllabus, amended copies will be dated and made available to the class.

Custom Text Chapter Cross-Reference to Standard Text

Chapter and Title		Chapter in Standard Text
1.	Defining Information Technology	1.
2.	Exploring the Human-Computer Interface	2.
3.	The Basics of Networking	3.
4.	A Hypertext Markup Language Primer	4.
5.	An Introduction to Debugging	6.
6.	Locating Information on the World Wide Web	5.
7.	Social Implications of IT	11.
8.	The Basics of Spreadsheets	13.
9.	Representing Information Digitally	7.
10.	Representing Multimedia Digitally	8.
11.	Algorithmic Thinking	10.
12.	Fundamental Concepts Expressed in JavaScript	17.
13.	A JavaScript Program	18.
14.	Programming Functions	19.
15.	Appendix: XHTML Reference	Appendix A
16.	Appendix: JavaScript Programming Rules	Appendix D
17.	Appendix: The Bean Counter Program	Appendix E
18.	Appendix: Memory Bank Page	Appendix F

CSCI 105 Course Outline (Tentative)

Unit 0 Computer Proficiency

Unit 1 Introduction to Computer Fluency

- 1.1 Course Introduction
- 1.2 Getting Acquainted with Computer Fluency
- 1.3 The Human-Computer Interface
- 1.4 Introduction to Networking

Unit 2 Building and Debugging HTML Web Pages

- 2.1 Getting Started with HTML (Hypertext Markup Language)
- 2.2 Introduction to Debugging
- 2.3 Working with HTML -- Images and Hyperlinks
- 2.4 Using HTML -- Lists, Colors, and Tables

Unit 3 Online Research; Societal Issues; Using Spreadsheets

- 3.1 Online Research
  - a. World Wide Web
  - b. Libraries and other Research Databases
- 3.2 Society
  - a. Computer Security
  - b. Protecting Personal Privacy
- 3.3 Online Spreadsheets

Unit 4 Encoding and Decoding Data; Algorithms

- 4.1 Representing Information Digitally
- 4.2 Representing Multimedia Digitally
- 4.3 Algorithms

Unit 5 Programming with JavaScript

- 5.1 Introduction to JavaScript and Programming Concepts
- 5.2 Fundamentals of Input, Processing, & Output
- 5.3 Conditionals, GUIs, and Event-Driven Programming
- 5.4 Functions