

Fall 9-1-2018

CSCI 105.01C: Computer Fluency

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Missoula College UM**Department of Applied Computing and Engineering Technology**

Course Number and TitleCSCI 105 Computer Fluency -
Section01C (CRN 71488) -
Term Fall 2018 -
Semester Credits3 -
PrerequisitesPrior computing experience, M65 (basic math/algebra skills) -

Faculty Contact Information

Faculty	Office	Office Hours
Steven (Steve) L. Stiff - Phone: (406) 243-7913 - Email: steven.stiff@umontana.edu	MC322	MWF, 11:30 AM – 12:30 PM or by appointment

Class Meeting Times and Final

Day, Time, and Location MWF, 10:00am – 10:50am, MC025 -
Final Exam Date, Time, and Location R, 12/13/18, 8:00am – 10:00am, MC025 -

Course Description

Introduces the skills and concepts of information technology, from both a practical and a 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** requires a deeper understanding and competency of concepts involving information technology and is the basis of this course. The term **fluency** 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, 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 and they give insight into its opportunities and limitations. Concepts are the raw material 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 this course 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

- **CSCI 105 Computer Fluency - Custom for University of Montana**, Snyder and Schneider, © 2017, Pearson Custom Textbook, ISBN 978-1-323-68401-6

Note: The textbook for the course is a custom text and is only available from the UM Bookstore. This text is not available from online wholesalers (such as Amazon).

The material in the text is taken from two different resources. Rather than purchase both textbooks, we have taken only those resources that will be used in this course with the goal of minimizing student expense.

Evaluation and Grading Criteria

<u>Assessment</u>	<u>Grading Scale</u>
Exams 40.0%	100% - 90% A
Homework 60.0%	< 90% - 80% B
Attendance (Bonus) 2.0%	< 80% - 70% C
	< 70% - 60% D
	< 60% F

Course Policies

Online Component

As this is an online course, all components of the course will be delivered via UMOonline (<http://umonline.umt.edu>) and the Moodle Learning Management System. It is the responsibility of the student to be familiar with, and able to work in, the Moodle **shell**. Moodle training is available through UMOonline at [Moodle 101 for Students](#).

Careers and Professional Development

As you progress through the IT program coursework towards a certificate in IT and an Associate of Applied Science degree in IT, never lose sight of the fact that you are pursuing a career choice. A number of the topics covered in this Course Policies section of the syllabus discuss the expectations of this course, similar to the expectations of an employer. These topics emphasize particular aspects of professional development and personal responsibility such as attendance, assignment completion, and classroom behavior, much the same as an employer emphasizes being on time, on task, and representing the company.

Be sure to review the topic on **Careers and Professional Development** in the **Course Information: Things You Need to Know** section of this course’s Moodle shell.

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://www.umt.edu/student-affairs/dean-of-students/default.php>*

Attendance

- Regular classroom attendance is expected and attendance is taken.
- Students more than 5 minutes late for class will not receive credit for attendance.

Attendance Bonus

The attendance bonus is based on course attendance and is added to the student's semester - percentage. This policy provides students the possibility of advancing their semester grade to the - next grade level by being diligent in their attendance. -

The bonus is based on the percentage of contact hours attended as follows: -

Attendance % Bonus %

- 90% - 100% 2.0% -
- 80% - 90% 1.0% -

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.

Tutoring/Mentoring

Missoula College has a Learning Center that provides course tutoring and mentoring. Contact Betsy Cincoski for more information, Room MC 022, 243-7826, betsy.cincoski@umontana.edu.

Electronic Communication Devices

- 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*).

Email

This course uses your student email account for all course email communication. Therefore, you are required to monitor and use your student email account for all course email communication.

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 <https://www.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 Learning Center (LC) scheduling form for my signature at least 3 days prior to the scheduled test date (the LC requires the signed form at least two days prior to testing). LC contact information is available at <http://mc.umt.edu/learning-center/> or call **406-243-7826**.

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/registrar/students/dropadd.php>. 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 form. A properly completed and approved drop form will prevent you from receiving a failing grade on your college transcript.
- Please note: if you are receiving financial aid, dropping 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 other circumstances. If changes are made to the syllabus, dated amended copies will be made available to the class.

Semester Dates

Mon, August 27 Autumn Semester Classes Begin -
 Mon, September 3..... Labor Day – No Classes, Offices Closed -
 Tue, November 6..... Election Day – No Classes, Offices Closed -
 Mon, November 12 Veterans Day Observed – No Classes, Offices Closed -
 Wed-Fri, November 22-23..... Thanksgiving Break – No Classes, Offices Closed -
 Mon-Fri, December 10-14 Final Exams -

CSCI 105 Course Outline

(tentative)

Unit 1 Defining IT (Chapter 1)

1. Welcome to Computer Fluency
2. Defining Information Technology
3. Metric Units and Metric Units
4. Analytic Comparisons: Image Resolution & Factor of Improvement

Unit 2 The Human-Computer Interface (Chapter 2)

1. Exploring the Human-Computer Interface
2. Comparing Operating Systems and Their Application Programs
3. Common Software Features

Unit 3 Networking Basics (Chapter 3)

1. The Basics of Networking
2. IP Networking and Domain Naming Services
3. Networking & File Transfer - SFTP & HTTP Protocols

Unit 4 Creating an Online Presence (Chapters 4 and 6)

1. A Hypertext Markup Language Primer (Chapter 4)
2. The First Web Page
3. Debugging (Chapter 6)
4. Hyperlinks & Images
5. Tables & Lists
6. Creating a Web Site
7. Cascading Style Sheets (CSS) & the "Box Model"

Unit 5 Locating Information on the WWW (Chapter 5)

1. Locating Information on the Web
2. Libraries and Online Research

Unit 6 Representing the Real World (Chapters 7 and 8)

1. Representing Information Digitally (Chapter 7)
2. Data Storage & Encoding
3. Representing Multimedia Digitally (Chapter 8)

Unit 7 Surviving in the Digital World (Chapters 9 and 10)

1. Social Implications of IT (Chapter 9)
2. Privacy and Digital Security (Chapter 10)

Unit 8 Intro to Computer Programming using Python (Chapter 11)

1. An Introduction to Computing and Problem Solving (Chapter 11)
2. An Introduction to Python Programming

Unit 9 Working with Objects, Variables, and Input/Output in Python (Chapter 12)

1. Working with Numbers
2. Working with Strings
3. Working with Enhanced Output
4. Working with Lists

Unit 10 Working with Decision-making and Loops (Chapter 13)

1. Working with Relational Operators & Logical Operators
2. Working with Decision Structures
3. Working with the "while" Loop
4. Working with the "for" Loop

CSCI 105 Course Schedule

(tentative)

- Week 1: Syllabus Review and Course Overview
Unit 1: Defining IT (Chapter 1)
- Week 2: Labor Day
Unit 1: Defining IT (Chapter 1)
Unit 2: The Human-Computer Interface (Chapter 2)
- Week 3: Unit 2: The Human-Computer Interface (Chapter 2)
- Week 4: Unit 3: Networking Basics (Chapter 3)
- Week 5: Unit 4: Creating an Online Presence (Chapters 4 and 6)
- Week 6: Exam 1: Units 1, 2, and 3
Unit 4: Creating an Online Presence (Chapters 4 and 6)
- Week 7: Unit 5: Locating Information on the WWW
- Week 8: Exam 2: Units 4 and 5
Unit 6: Representing the Real World (Chapters 7 and 8)
- Week 9: Unit 7: Surviving in the Digital World (Chapters 9 and 10)
- Week 10: Exam 3: Unit 6
Unit 8: Intro to Computer Programming using Python (Chapter 11)
- Week 11: Federal Election Day
Unit 9: Working with Objects, Variables, and Input/Output in Python (Chapter 12)
- Week 12: Veterans Day
Exam 4: Unit 7
Unit 9: Working with Objects, Variables, and Input/Output in Python (Chapter 12)
- Week 13: Unit 10: Working with Decision-making and Loops (Chapter 13)
Thanksgiving Break
- Week 14: Unit 10: Working with Decision-making and Loops (Chapter 13)
- Week 15: Unit 10: Working with Decision-making and Loops (Chapter 13)
- Week 16: Exam 5: Units 8, 9 and 10