

COSC171: Problem Solving with Computers - Fall 2009-10

Instructor: **Cindy Lehman**

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Time & Place: Tuesday & Thursday @ 8:00 – 9:15 am

Frey Hall 243 (Classroom); Frey 145 (Computer Lab)
Class website: <https://sakai.messiah.edu> (MCSquare username/password)
COSC171 Website: <http://cs.messiah.edu/cosc171/>

Description

This course gives the student a broad and hands-on exposure to the capabilities and uses of the computer. In this course you will study a number of problems that computers can solve and various tools [programs or applications] used for their solutions.

You will become more familiar with computer vocabulary, the computer-users culture, and technology tools to better adapt you for life and work in the 21st century. Learning will take place through lectures, discussions, independent practice, teamwork, and exams.

Prerequisites

There are no prerequisites to COSC 171. No previous experience with computers is assumed. You will need a cooperative attitude and an openness to learning new, useful computer skills! This course satisfies the three-hour general education requirement for a course in mathematical sciences.

Materials

1. Binder or divided storage for course documents (available in the college bookstore)
2. COSC171 Course Manual (available online at <http://cs.messiah.edu/cosc171/>)
3. USB flash drive, optional but highly recommended

Requirements and Evaluation

Your grade will be based on the following:

1. **Project assignments (70%) – labs, quizzes and class activities.** Project assignments are due *at the beginning of class* on the day specified. Late assignments will be penalized as follows: mid/end of class –5% deduction, 10% deduction for each additional class. If you will be absent on the day an assignment is due, ask a classmate to bring your assignment or deliver it to the office (Frey 237D) prior to class.
2. **Exams - midterm (15%); final exam (15%)**
3. **Attendance is expected** so that you are able to contribute to discussion (in lecture) and interact with classmates on projects (in lab). Three or more absences will result in a lower overall course grade (no more than 5% deduction).
 - a. Attendance will be taken at every class.
 - b. Each student is **responsible for the material covered** and the announcements made at every class. If you are absent, check the attendance clipboard for papers that were distributed during the class you missed. Be sure to check with a classmate about lecture content and assignments. Use Sakai for class resources, assignment dates, and announcements.
 - c. Students are allowed TWO missed class sessions without penalty, no questions asked (i.e. sickness, flat tire, optional campus event). Please plan accordingly! Avoid missing class when it will affect classmates.

- d. **Contact the professor** via phone/email promptly about your absence, either unexpected or preplanned. Your communication about being absent is important and demonstrates responsibility.

Letter Grade Assignments

	Lowest	Lowest	Lowest	Lowest	
	B+	88	C+	78	D+ 68
A	93	B	83	C	73
A-	90	B-	80	C-	70
					F Below 65

Lab Reports

Develop a lab report for each project, which includes a cover page, lab requirements, and appropriate descriptions. Your final projects should look professional. Everything in your report must be created electronically. *Do not add hand-written comments.* If you have questions about adding textbox labels to pictures and diagrams, please ask them.

Cover Page:

The cover page will contain your name, the lab title and number, course number, the date, and a related graphic. *Staple or paper-clip reports* at the top left corner of the paper to keep your work separate from others' work.



Lab Requirements:

In addition to completing the lab, you will also comment on each lab requirement. Carefully confirm the most up-to-date lab requirements for *our* section of COSC171. Comment on each lab requirement by telling how you met the lab requirement, using descriptions and/or snapshots. Lab requirements should be numbered and in the correct order. Bold & underlined labels are also helpful.

Sample from Website Lab:

“2. Graphics: Effective graphics on all web pages.

All web pages contain effective graphics. The size of images was adjusted to minimize load time. Small graphics are also used to link to additional pages within the website. At the right is a graphic that links to a page titled Humorous Stories.”



Ac

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Students are responsible to read and abide by the policy on academic integrity in the Messiah College Student Handbook, pages 11-13 (available at http://www.messiah.edu/offices/student_affairs/student_handbook/resources/0708/academiclife.pdf). In addition to plagiarism (copying others' work without proper acknowledgment), the college policy also forbids facilitating academic dishonesty (e.g., allowing one's work to be copied) and any attempt to gain an unfair advantage over other students. If you receive help from others or Internet sources, or if you use graphics from the Internet, you must clearly document this in your assignments.

COURSE OBJECTIVES

General Education Objectives (College-wide Education Objectives):

The General Education program at Messiah College encourages the development of knowledge, skills, and attitudes of intellect, character, and faith that Christians use in lives of service, leadership and reconciliation.

Department of Mathematical Sciences Objectives:

By the completion of the course the students will demonstrate the ability to:

- Identify methods and assumptions of the mathematical sciences
- Understand at least one of the three mathematical sciences of computing, mathematics, and statistics from a liberal arts perspective
- Think logically, analytically, and abstractly through engagement in quantitative problem-solving activities

ADA (AMERICANS with DISABILITIES AC) Statement:

Messiah College welcomes students with disabilities. Any student whose disability falls within ADA guidelines should inform the instructor at the beginning of the semester of any special accommodations or equipment needs necessary to complete the requirements for this course. Students must register documentation with the Office of Disability Services (Hoffman 101). If you have questions, contact extension 5382.

INCLUSIVE LANGUAGE POLICY:

See Student Handbook (in 2005-06 edition, p. 111)

From the policy: "Messiah College is a Christian community of divinely created beings informed by God's love and pursuing truth in every endeavor. We are committed to the use of inclusive language as a means of reflecting our Christian commitment and responsibility as we serve as a creative and liberating force in the world."

COSC171 Objectives:

By the completion of the course the student will:

- solve problems using various computer software.
- interact with the Windows operating system; organizing, storing, copying, deleting, and finding files.
- use and evaluate Internet Search Tools.
- use the HTML language to make attractive, functional web sites.
- use a graphics programs to manipulate images and include graphics with text in lab reports.
- solve numerical problems using spreadsheet data and present data graphically.
- learn and use presentation software.
- be introduced to the design and basic use of databases.
- be introduced to computer hardware.
- discuss computers and their impact on our culture, including what computers can and cannot do.

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