

**Mississippi Valley State University
Mathematics, Computer & Information Sciences
Itta Bena, Mississippi 38941**

Course Syllabus

Course Number: CS 112 **Meeting Times:** MWF 10:00 am – 10: 50 am
Course Title: Survey of Comp Sci. **Credit Hours:** 3 Credit Hours
Course Instructor: Timothy Holston **Course Coordinator:** Timothy Holston
Email: thost@mvsu.edu **Website:** <http://bluebird.mvsu.edu/~tholston>
Office Hours: **MW 1:00 PM – 2:00 PM & TR 1:00 PM – 5:00 PM**

Catalog Description This course provides a brief history of computers and computer organization. A survey of topics including: data representation; von Neumann model; computer networks; operating systems; algorithm design; data structures; and databases; is given to familiarize incoming majors with the foundations of computer science. Students will be exposed to some application software and an introduction to object oriented design. **Course Prerequisites:** CS major or consent of instructor

Textbook(s) and other Required Materials:

Forouzan, Behrouz A. and Firouz Mosharraf, Foundations of Computer Science, Brooks/Cole

Program Objectives and Outcomes:

2. Have the ability to utilize informational resources for projects and research and to convey issues related to the discipline of computer science in oral and written communication.
 - 2.4. Understand, write about, and speak about social and ethical issues in computer science.
3. Have obtained sufficient depth and breadth in computer science, mathematics and science to analyze and solve problems.
 - 3.1. Use computer science, mathematics and science principles and computing practices to analyze and solve a computer science problem.
 - 3.2. Demonstrate an understanding of mathematics and natural science.

Course Outcomes:

Students will be able to:

1. Identify and manipulate the different representations of data
2. Understand and write about a basic issue related to ethics in computer science
3. Take a simple problem and program a solution using object oriented concepts
4. Identify different classification of computers
5. Understand the basic components of a computer system

Course Outcomes Mapped to Program Outcomes												
Survey of Computer Science												
Course Outcomes	PO 1.1	PO 1.2	PO 1.3	PO 1.4	PO 2.1	PO 2.2	PO 2.3	PO 2.4	PO 3.1	PO 3.2	PO 4.1	PO 4.2
1										x		
2							x	x				
3									x			
4										x		
5										x		

Prerequisite by Topic:

None

Major Topics Covered in Course:

Computer Fundamentals	# wks (3 hours)
Software Productivity Software	(3 hours)
von Neumann Model	(1/2 hour)
History of Computing	(1 hour)
Data Representation	(4 hours)
Number Representation	(5 hours)
Logical Operations	(3 hours)
Computer Organization	(3 hours)
Computer Networks	(4 hours)
Operating Systems	(2 hours)
Object Oriented Design	(5 hours)
High/Low-level languages	(2 hours)
Software Engineering	(1 hour)
Database Systems	(2 hours)

Laboratory Projects:

Using a search engine to find advances in computer science	(1 hour)
Network Protocols	(2 hours)
Computing Applications	(2 hours)
Object-Oriented Design	(2 hours)

Estimate ABET Category Content		
	Core	Advanced
Data Structures	.5	0
Algorithms	.5	0
Computer Organization & Architecture	.5	0
Concepts of Programming Languages	1	0
Software Design	.5	0

Oral and Written Communications:

Student will be required to write small 1-2 page papers regarding topics/developments in computer science.

Social and Ethical Issues:

Students will be required to write 1-2 papers regarding ethical issues in computer science. Students will also be lead in discussion about ethical issues such as peer-to-peer file sharing, encryption, email privacy, software piracy, hacking and spam.

Theoretical Content:

- Data Representation
- Algorithm Design
- Object Oriented Design
- Computer Organization

Problem Analysis & Solution Design:

Students will develop algorithms to complete a given task using general software design techniques.

- Students will design a personal website using html.
- Students will also use Object-Oriented Design to accomplish a set of task using ALICE.

Grading Scale		Course Evaluation:	
90 - 100	A	Quizzes and tests	20%
80 - 89	B	Programming assignments	50%
70 - 79	C	Final examination	20%
50 - 69	D	Attendance and participation	10%
49 and below	F	**Cheating on exams will result in course failure**	

Attendance Policy: Students are required to attend classes on a regular basis. Three (3) unexcused absentees will result in the lowering of grades. Three tardies constitute one absentee. In addition, class participation and performance also constitutes an integral part of the assessment process.

Late/Missed Assignments: Each student must present a valid excuse for absences for which they wish to receive an official absence. Tests missed with an excused absence will be made up by doubling the grade on the following test. Late assignments will receive an automatic one-half reduction in point value during the 1st half of the semester. No late assignments will be accepted during the 2nd half of the semester.

Student with Special Needs: Mississippi Valley State University is committed to providing reasonable accommodations for students with a documented disability. If you feel you are eligible to receive accommodations for a covered disability (medical, physical, psychiatric, learning, vision, hearing, etc.) and would like to request it for this course, you must be registered with the Services for Students with Disabilities (SSD) program administered by University College. It is recommended that you visit the Disabilities Office located inside the EMAP Computer Lab in the Technical Education (IT) Building to register for the program at the beginning of each semester.

For more information or to schedule an appointment, please contact Mr. Billy Benson, Jr. via phone or email at 662-254-3005 or billy.benson@mvsu.edu.