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

Course Syllabus

Course Number: CS 112	**Meeting Times:** MWF 10:00 – 10:50am **(CRB 105)**
Title: Survey of Comp Sci	**Credit Hours:** 3 Credit Hours
Course Instructor: Marcus Golden	**Course Coordinator:** Marcus Golden
Email: marcus.golden@mvsu.edu	**Office:** 134 CRB & **Phone:** 3401

Office Hours:
- **M** 11:00am – 3:00pm, **W** 11:00am – 2:00pm (WCONLINE)
- **TR** 11:00am – 2:00pm

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.

Prerequisites: CS major or consent of instructor

Textbook:
Venit, Stewart and Elizabeth Drake <u>Prelude to Programming Concepts and Design</u>, *Pearson*

Program Outcomes:
Student will be able to:
  1.1 Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
  1.2 Apply computer science theory and software development fundamentals to produce computing-based solutions.
  2.1 Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
  2.2 Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
  3.1 Communicate effectively in a variety of professional contexts.

Course Outcomes:
Student 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
6. Communicate the results of research of a famous computer scientist.

Course Outcomes Mapped to Program Outcomes						
CS 425 Software Engineering						
Course Outcomes	PO 1.1	PO 1.2	PO 2.1	PO 2.2	PO 3.1	PO 3.2
1		x	x	x		
2	x				x	
3	x			x		
4				x		
5				x		
6					x	

Prerequisite by Topic:
None

Major Topics Covered in Course:	**# wks**
Introduction	1 wk
Introduction to Programming	1 wk
Data Representation	3 wks
Developing a Program	3 wks
Selection Structures: Making Decisions	1 wk
Repetition Structures: Looping	1 wk
More about Loops and Decisions	1 wk
Arrays: Lists and Tables	1 wk
Searching and Sorting Arrays	1 wk
Program Modules, Subprograms and Functions	1 wk
Sequential Data Files	1 wk
Object Oriented and Event Driven Programming	1 wks

Laboratory Projects:
Using a search engine to find advances in computer science
Network Protocols
Computing Applications
Object-Oriented Design

Estimated CAC Category Content	
	Core
Algorithm & Complexity	0.5
Concepts of Programming Languages	1
Software Development	0.5
Computer Architecture and Organization	0.5
Information Management	0.5

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 tasks using Raptor.

Assessment
The Final grade will be computed as follows:

Quizzes and tests	33%
Projects and Assignments	33%
Examinations	34%

Grading System

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
59 - below	F

Homework/Lab Assignments: All assignments must be completed and handed in on time at the beginning of class. Make sure you are following the format guidelines required for each assignment. I will not accept a partially completed assignment. Also, 10 points will be deducted for each class day that work is turned in late. After 3 days being late, work will not be accepted. Exceptional circumstances should be discussed with the instructor in advance.

Attendance Policy: Attendance is required. Please make every effort to arrive on time! For every 4 unexcused absents, you will receive a letter grade drop. In an event of an absent, you must provide valid documentation base on the university's requirements for the absent to not count against you. Students who wish to discontinue the class should officially drop the course; otherwise a grade of "F" will be recorded.

Student Code of Conduct/Civility: Full details may be obtained from the Student Handbook. At a minimum, I expect you to treat each other (and your instructor) politely and with respect. This includes turning off all cell phones (or muting them), participating in class, and arriving in a timely manner. Cell phones/iPods/multimedia devices are to remain in your bags or pockets and should not be visible at any time during the class/lecture/lab hours. There is no laptop use in the classroom during class hours unless instructed to use them. Please remember that personal

conversations during lecture and lab time are distracting to your fellow students and instructor, thus they are not permitted. Collaboration on a project is an exception, of course.

Cheating, Plagiarism/Academic Integrity and Penalties
Any student who submits another student's work as their own will have committed the act of plagiarism. This includes programming assignments and papers. Cutting and pasting from another paper (from web) without giving proper credit to the author of the original paper will be considered plagiarism. Copying parts of another student's paper and programming assignments is also considered plagiarism. The student receives an automatic F on that paper/assignment if it is plagiarized. If the student commits the act of plagiarism a second time, then the student will receive an F grade for that class.

Make-up Policy
Any activity missed due to an absence will require an excused absence from the university (an official university document).

CANVAS - DISTANCE EDUCATION AND ONLINE LEARNING

Canvas Instructure products support the current and previous major releases of the following browsers:

- **Chrome** 102 and 103
- **Firefox** 101 and 102 (Extended Releases are not supported*)
- **Edge** 102 and 103
- **Respondus Lockdown Browser** (supporting the latest system requirements)
- **Safari** 14 and 15 (Macintosh only)

    You can verify that the browser you are currently using is up to date by using the browser checker tool in the link below.

    https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66

Important note: If you need help downloading one of these browsers, The Online and Distance Education Staff will be happy to help you. Submit a helpdesk ticket by emailing DistanceEd@mvsu.edu. Please use your MVSU email address to submit your helpdesk ticket. You can also receive assistance by calling 662-254-3913 or 662-254-3624.

ADA/STUDENTS 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 in the Social Science Building Office 105 to register for the program at the beginning of each semester.

For more information or to schedule an appointment, please contact Mrs. Kathy Brownlow, via phone or email at 662-254-3443 or kbrownlow@mvsu.edu.

I reserve the right to make changes on this syllabus as needed. This document does not constitute a contract with the University. It contains guidelines.