

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

Course Syllabus

Course Number: CS 204

Meeting Times: TR 9:25 – 10:40 am (CRB 105)

Title: Computer Programming II

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 will further develop and expand upon the topics introduced in CS203. Advanced object-oriented programming techniques will be covered. This course will also introduce topics in pointers, arrays, file processing, sorting and search algorithms and string manipulation. All programs will be implemented on the UNIX operating system.

Prerequisites: CS 203

Textbook:

T. Gaddis, J. Walters, and G. Muganda, Starting Out with C++: Early Objects, 10th ed.

Program Outcomes:

Student will be able to:

- 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.

Course Outcomes:

Student will be able to:

1. Write programs that use data structures such as arrays, records and strings.
2. Compare and contrast the costs and benefits of dynamic and static data structure implementations.
3. Choose an appropriate data structure for modeling a given problem.
4. Analyze functions/loops using Big-O notation.
5. Use object-oriented programming to create classes that inherit attributes from other classes.
6. Compare and contrast sorting mechanisms in determining which is best in a solution to a given problem.
7. Compare and contrast searching mechanisms in determining which is best in modeling a specific problem.

8. Perform string processing using functions of the *string* class.

Course Outcomes Mapped to Program Outcomes						
CS 204 Computer Programming II						
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	x		
3		x	x	x		
4		x	x	x		
5		x	x	x		
6		x	x	x		
7		x	x	x		
8		x	x	x		

Prerequisite by Topic:

None

Major Topics Covered in the Course:

	# wks
Objects	2 wks
Array Implementations	2 wks
Bubble sort, Selection sort	2 wks
Searching Algorithms	1 wk
Pointers	3 wks
String Manipulation	2 wks
Analysis of Algorithms	1 wks
Advanced File and I/O Operations	2 wks

Laboratory Projects:

Array Implementations
 Sorting Algorithms
 Searching Algorithms
 Pointers
 Advanced File and I/O operations

Estimated CAC Category Content	
	Core
Algorithm & Complexity	0.5
Software Development	0.5
Information Management	1.5
Operating Systems	0.5

Oral and Written Communication:

No component

Social and Ethical Issues:

No component

Theoretical Content:

Algorithm Design

Object Oriented Design

Problem Analysis and Design:

Students will be given problem descriptions in which they have to come up with a correct design. They will be required to give an analysis and reasons for different implementations.

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.