CS 121: Computer Science 1/Software Applications
2024 (4 credits) 2 Credits MTCHS

Instructor: Duane Erickson
Location: Meridian Technical Charter High School
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Required Texts/Web:
Java Foundations: Introduction to Program Design and Data Structures, 3rd edition
by John Lewis, Peter DePasquale, and Joseph Chase..
Class Web Page
http://mtchs.moonami.com/course/view. php?id=233

Course Description:
Introduction to object-oriented problem solving and programming. Software development process.
Data and expressions, conditionals and loops, arrays and lists, and classes and interfaces.
Introduction to graphical user interfaces and UML diagrams.

Course Objectives:
At the end of this course, the student is expected to be able to
• design object-oriented solutions to programming problems,
• implement working solutions to programming problems using good coding and documentation styles,
• explain basic concepts of computer science such as algorithms, abstraction, and encapsulation,
• use an integrated development environment that is specialized for program development with reasonable
proficiency.

Class Mailing List/Email
The class mailing list will be used for disseminating information. Students are responsible for knowing anything
in the emails. It is expected that email be checked at least once per day!

Attendance
Students are expected to attend all classes.

MTCHS students taking the class for high school credit only
MTCHS students not taking the class for college credit will have the same grading policies with the exception
that they may follow the MTCHS redo policy for tests, and programming and homework assignments.

Assignments:

Programming Projects

There will be several programming projects throughout the semester. Written communication skills are assessed in documentation for programming projects.

- Programming projects require the implementation of working programs using the language constructs and techniques introduced in class.
- Programs must be written individually. Students who copy programs or sections of programs from each other or from any other source will be considered to be cheating as will students who allow their programs to be copied. See Academic Honesty section below for more information.
- Programs must run on the instructor's test computer. Any programming project that does not compile and run on will be awarded a score of 0 points. In order to improve that score, students must spend enough time with the instructor or a tutor to get the program running.
- Programs must be submitted by midnight the day they are due. Late programs are subject to a deduction of 10% every 2 days from the maximum possible score (e.g. a perfect program is worth 100 points if submitted before midnight and is only worth 90 points at 12:00 AM the second day). Programs will not be accepted more than 4 days late.

Exams and Quizzes

In-Class Quizzes

Quizzes will be given in class over assigned reading and/or material covered in class. In-class quizzes must be taken in class on the day they are given. Make-up quizzes will not be granted.

Final Exam

The final exam date is shown on the course website. Unless alternate arrangements are made in advance, only officially excused absences will be accepted for missing an exam. Any resources allowed for exams will be at the instructor's discretion.

Grading Policy

- Projects: 40%
- Classwork: 20%
- Quizzes: 20%
- Final Exam: 20%

Final Grade Scale:

A = 90% – 100%
B = 80% – 89%
C = 70% – 79%
D = 60% – 69%
F = 0% – 59%

Student Code of Conduct
Please note that high school students enrolled in concurrent credit classes are held to the same student standards found in the Boise State University Student Code of Conduct.
Official University Academic Dishonesty Policy
Overview reproduced below. The full policy and procedures may be found at
http://deanofstudents.boisestate.edu/academic-dishonesty
The term "academic dishonesty" may include cheating, plagiarism, or other forms of academic dishonesty. All assignments submitted by a student must represent her/his own ideas, concepts, and current understanding or must cite the original source. Attempts to violate the academic integrity of an assignment do not have to be successful to be considered academic dishonesty. Academic dishonesty may include, but is not limited to:
1. Stealing and/or Possessing Unauthorized Material: The unauthorized appropriation, possession or use of the property of another; the forgery or misuse of documents;
2. Fabrication and Falsification: The unauthorized alteration or invention of any information or citation;
3. Multiple Submission: The submission of substantial portions of the same assignment for credit more than once without the prior permission of all involved faculty members;
4. Abuse of Academic Material: Destroying, stealing, or making inaccessible library or other academic resource material;
5. Complicity in Academic Dishonesty: Intentionally or knowingly helping or attempting to help another commit an act of academic dishonesty.

Procedures for Breach of Academic Misconduct
First offense: Student will receive a 0 on the assignment and an Academic Misconduct
Report Form will be submitted to the Office of the Dean of Students.
Second offense: Student will receive an F in the course and an Academic Misconduct
Report Form will be submitted to Office of the Dean of Students.
Academic Misconduct Form:
http://deanofstudents.boisestate.edu/wp-content/uploads/2014/10/Academic_Dishonesty_Report_Form.pdf

Class Schedule: M-F, August – December
       Juniors: 9:39 - 11: 10 AM

Week 1, 2, 3	Topics and Notes
	    ● Intro to CS 121
	    ● Ch 1: Introduction
	    ● Ch 2: Data Types and Expressions
	Slides
	    ● Strings and Variables
	    ● Data Types and Expressions
	    ● Conversions and Assignment Operators

Weeks 4, 5	Topics and Notes
	    ● Eclipse
	    ● Ch 3: Using Classes and Objects
	    ● Intro to Graphics
	Slides
	    ● Graphics
	    ● Intro to Object-Oriented Programming
	    ● APIs - Random, Math, and Strings
	    ● APIs - Scanner and Number Formatting
	Quiz 1 - Topic: Ch 1 & 2
	Assigned Project - P0: Traffic Animation

Weeks 6, 7	Topics and Notes
	    ● Ch 4: Conditionals and Loops
	Slides
	    ● Conditionals - Operators, if, if-else
	    ● Conditionals - comparing data, switch, ternary
	    ● Loops - while, for, nested
	    ● ArrayLists, for-each, and Iterators
	Quiz 2 - Topic: Ch 3
	Assigned Project - P1: Playlist Analyzer

Weeks 8, 9	Topics and Notes
	    ● Ch 5: Writing Classes
	Slides
	    ● Writing Classes
	    ● Methods
	    ● Method Overloading and Class Relationships
	    ● Enumerations
	Quiz 3 - Topic: Ch 4
	Assigned Project - P2: Jukebox Hero

Weeks 10	Topics and Notes
	    ● Files and Exceptions
	Slides
	    ● File Parsing and Exceptions
	    ● Using Interfaces and Array Basics
	No Quiz
	Assigned Project - P3: Library of Books

Week 11, 12	Topics and Notes
	    ● Ch 7: Arrays and Command-Line Arguments
	Slides
	    ● Arrays
	    ● Command-line Arguments and 2D Arrays
	Quiz 4 -Topic: Ch 5
	Assigned Project - P4: Tic Tac Toe

Weeks 13, 14	Topics and Notes ● Ch 6: GUIs Quiz 5 - Topic: Arrays Assigned Project - P5: Reader of Books
Week 15	Final Exam Review
Week 16	Final Exam