

SU DEPARTMENT OF COMPUTER SCIENCE SYLLABUS
COSC117 *Programming Fundamentals*

Description: A first course for students interested in computer programming, which involves solving problems by designing, implementing, and testing algorithms. Emphasis throughout the course is on problem solving and learning to develop computer programs that are readable, well-documented, efficient, and correct. Three hours Java

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| programming language basics: variables, expressions, statements, standard input/output statements. | 2.0 |
| <i>More on Java Programming Fundamentals</i> Primitive data types, characters and string, arithmetic/comparison operations, Boolean expressions. | 2.0 |
| <i>Control Flow</i> Iteration with loops (for, while, do-while), decision making with if and switch statements. | 3.0 |
| <i>Data Structures</i> Define and use one and two dimensional array. | 2.0 |
| <i>Classes and Objects</i> Class and method definitions, objects, static/non-static class members (data members and methods), parameter passing for methods. | 2.0 |
| <i>Object-Oriented Design</i> Top-down design, program development with multiple classes and objects. | 1.0 |
| <i>GUI and Event-driven Programming (optional)</i> Programming with GUI and handling events generated by mouse clicks, key presses. | 1.0 |
| <i>Test</i> | 1.0 |
| <i>Total</i> | 14.0 |

EVALUATION

Homework - 20%

Programming projects - 30%

| Letter grade | Students final grade |
|--------------|--------------------------|
| A | 90% above |
| B | $\geq 80\%$ and $< 90\%$ |
| C | $\geq 70\%$ and $< 80\%$ |
| D | $\geq 60\%$ and $< 70\%$ |
| F | $< 60\%$ |

Exercises and Activities: This course contains list of programming exercises and discussion activities to practice the software development. The programming exercises will be in the lab and out of classroom and discussion activities will be in the classroom.

Writing Across the Curriculum:

The Computer Science Department supports the SU position that graduates will be able to communicate clearly and correctly in all written work. Program design and documentation of programs require extensive writing that meets the writing across the curriculum goal of the university and are subject to the following guidelines: correct spelling, punctuation, grammar, content and organization.

Additional information:

- Should inclement weather result in classes being canceled information will be given to all local radio and television stations. Students can receive information concerning cancellations by listening to local stations or by calling the Gull Line at (410) 546-6426. The institutional policy with regard to closing is that unless there are the most dire circumstances the institution will remain open for business. Students must exercise their best judgment about whether they attend class. Different conditions prevail for each individual under inclement weather situations so the decision should be essentially an independent one. If you do not hear an announcement about cancellation of classes, then classes and events will be held as scheduled. Please do not call the University Police Office about cancellation notices so that office can assist with emergency needs.
- Students are not to be penalized because of observances of their religious holidays and are to be given opportunity, wherever feasible, to make up within a reasonable time any academic assignments missed due to participation in religious observances. (<https://www.usmd.edu/regents/bylaws/SectionIII/III510.html>)
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