

SYLLABUS
Bowie State University
School of Arts and Sciences
Department of Computer Science

COSC 503: Software Design and Development I, Fall Semester 2008

INSTRUCTOR: Dr. Sharad Sharma
CLASS HOURS: W: 4:55 PM – 7:30 PM CSB 312
OFFICE HOURS: W 1:55 – 4:55 PM or by appointment
OFFICE LOCATION: Computer Science Building, Room 317
E-MAIL: ssharma@bowiestate.edu
COURSE WEBSITE: <http://www.cs.bowiestate.edu/~sharad/sdd/>

Required Text: Computing Concepts with C++ Essentials, 3rd Edition, Cay S. Horstmann, San Jose State Univ., ISBN: 978-0-471-16437-1, Publisher: Wiley

Reference Book(s):

1. Big C++, Cay S. Horstmann, San Jose State Univ., Timothy A. Budd , ISBN: 978-0-471-47063-2, Publisher: Wiley
2. Objects, Abstraction, Data Structures and Design: Using C++, by Elliot B. Koffman and Paul A. T. Wolfgang, ISBN: 978-0-471-46755-7, Publisher: Wiley

COURSE DESCRIPTION

Fundamental techniques of computer program development using a high level language. Topics include assignment, expressions, declarations, control statements, arrays, structures, functions and subroutines, block structure, string handling, programming methodology including top-down design, structured programming style and debugging. In addition it covers concepts of object-oriented programming, design, and inheritance.

PREREQUISITES - Should be admitted to Computer Science graduate program.

TEACHING MODES - Traditional classroom instruction involving in-class lectures/demonstrations and laboratory assignments. Pertinent course documents, assignments, and special announcements will be posted on the Course Website.

OUTLINE OF COURSE CONTENT

1. Introduction
2. Fundamental Data Types
3. Objects
4. Basic Control Flow
5. Functions
6. Classes
7. Advanced Control Flow
8. Testing and Debugging
9. Vectors and Arrays
10. Pointers
11. Inheritance
12. Streams
13. Object Oriented Design

OBJECTIVES: This course is designed to build the programming skill of the students using different data structures that will be useful in later courses.

STUDENT OUTCOMES: Up on successful completion of the course, the students should

1. Be able to write programs in C++
2. Design the programs in top-down approach
3. Be able to develop programs in PC environment

GRADING CRITERIA: The overall grades will be determined based on a combination of tests, projects, and attendance/attentiveness as described below:

GRADES			
Assignments/Homework	40%	90-100%	A
Mid-term Exam	20%	80-89%	B
Project	20%	70-79%	C
Final Exam (Comprehensive)	20%	60-69%	D
		Less than 60%	F

Programming assignment grading strategy

50% style - commenting, formatting, documentation, etc.

50% code - well designed, well written, running program that satisfies the program specifications

- * There will be no make-ups for Mid-term Exam and Final Exam.
- * Late submissions for assignments/homework: 10 marks will be deducted every day until submission.
- * Any changes to the above will be posted on the course website.
- * Exams are given in the class room during class time.
- * Exams are closed notes, closed book, open mind.

SPECIFIC STUDENT REQUIREMENTS:

1. Students are expected to maintain regular attendance at class/Labs and examination periods. If a student misses a test (with an excused absence), it is the responsibility of the student to make arrangements with the instructor for make-up. Generally make-ups are permitted only in emergency and special situations and within a week of the test.
2. Students will be expected to read and finish their homework/programs before coming to classes.
3. Students may need to spend a fair amount of time outside class to work on the projects.
4. Projects will be graded based on correctness, code, and style. Documentation will be stressed.
5. Each student can choose their own hardware/software to work on the computer projects. However, if they choose to use an off campus facility, they should be able to demonstrate the run session on campus.
6. Students can get assistance through the tutoring system or fellow students, but please do your own work. You will be responsible for understanding, explaining and recreating the concepts and terminology of that particular programming assignment.
7. Students are responsible for making up all assignments missed because of excused absences.
8. All homework and assignments are to be turned in *on or before the due date*, even if class is cancelled for *any* reason or you are not able to attend class. Assignments may be submitted in class, slipped under my office door, or given to me during my office hours. It is each individual student's responsibility to submit homework and assignments on time.

ATTENDANCE:

Students are expected to maintain regular attendance. After three unexcused absences, students will be referred to the chairperson

Students are responsible for updating themselves with any changes to the contents of the syllabus that the instructor brings to the attention of the class.

ADA Statement: Students with disabilities who wish to receive ADA accommodations should report to the Office of Special Populations, Martin Luther King Building, Room 136 (301-860-3292).

Cheating, copying: Any assignment that looks like it was copied, in whole or in part, from another student, an assignment from another term, a program on the web, etc. will receive a 0.

ENGLISH PROFICIENCY

Please take your English Proficiency Examination as early as possible!

After completing ENGL 101 and ENGL 102, students must take and successfully pass the Bowie State University English Proficiency Examination. Transfer students who completed their English composition requirements at another university should take the English Proficiency Examination during their first semester of enrollment at the University.

CLASS CANCELLATIONS

Classes will be cancelled when University is closed due to inclement weather, which will be announced over public radios/TV or through campus information (301-860-4000) or public safety (301-860-4040).

IMPORTANT TELEPHONE NUMBERS:

Dept of Comp Sc (Secretary): (301) 860-3960

Dept of Comp Sc (Fax): (301) 860-3979

Bowie State University (Main): (301) 860 4000

In case of inclement weather (snow etc.) please call (301) 860 4040 to find out if the university is open.