CSE 2050 Programming in Second Language
Spring 2019

2017–2019 Catalog Data: Introduces a second programming language for computer science majors. Students learn to read and write programs in a second language. The language chosen is one with wide popularity and use. The current language is C++. Requirement(s): Instructor approval or prerequisite course.
Required

Prerequisites by Topic: CSE 2010 (Data Structure).

Textbook (T) and References (R):
Primary Text Material: www.cplusplus.com
Suggested Reference: Bjarne Stroustrup: "Programming: Principles and Practice using C++ (Second Edition)" Addison-Wesley 2014, ISBN 978-0-321-99278-9.
http://www.stroustrup.com/Programming/

Course Outcomes & Related Student Outcomes: The students will be able to
1. Understand and implement simple data structures in C++. (3. An ability to use the techniques, skills, and modern tools necessary for computing and software engineering practice)
2. Manage memory allocation and deallocation. (3. --as above)
3. Understand fundamentals of object-oriented program design concepts, including inheritance, encapsulation, and polymorphism. (3. --as above)
4. Compare C++ against other languages. (4c. Comprehension of the trade-offs involved in design choices)

Topics Covered and Associated Time:
- C++ data types, control flow, and I/O (5/26 classes: 20%)
- Memory management in C++ (5/26: 20%)
- Functions, parameter passing and templates (4/26: 15%)
- Class and Object orientation (4/26: 15%)
- Inheritance and polymorphism (4/26: 15%)
- Tests, assignment discussion (4/26: 15%)

Tentative Grading plan: In-class announced/unannounced Quizzes: 30%, Mid Term 1: 15%, Programming Assignments: 30%, Final: 25%

Tentative Grade structure: A (90-100%), B(80-89.7%), C(66-79.7%), D(50-65.7%)
Curving may be done at the end of semester.

Schedule:
Offered in each semester

Class/Lab/Recitation Schedule: Two 70-minutes lectures per week

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