EECS 162 – Introduction to Programming II

Catalog Description: Basic data structures. Computer programming techniques and application of software engineering principles. Introduction to analysis of programs. Lec/lab.

Credits: 4    Terms Offered: All

Prerequisites: EECS 161 and (CS 225* or MTH 231*)

Courses that require this as a prerequisite: CS 261, EECS 261, CS 275

Structure: Three 50-minute lectures per week, and one 110-minute laboratory per week.

Instructors: TBA

Course Content:
- Graphical user interface design
- Event-driven programs
- State machines
- Data files
- Software quality factors
- Object-oriented programming principles
- Algorithm analysis

Learning Resources: One or more of the following:
- *Absolute C++*, Savitch and Mock, Addison-Wesley
- *Big C++*, Horstmann and Budd, Wiley
- *Programming and Problem Solving with C++* (5th edition), Dale/Weems
- Additional online resources.

Measurable Student Learning Outcomes:
At the completion of the course, students will be able to…

1. **Design** and **implement** object oriented programs that
   a. effectively communicates with another device
   b. create and use data files
   c. have graphical user interfaces (GUIs).
   d. use multiple classes, methods, objects, inheritance, and polymorphism
   e. use a variety of standard libraries
2. **Design** and **implement** a software state machine.
3. **Classify** moderately complicated algorithms in these complexity classes: O(1), O(log n), O(n), O(n log n), and O(n^2)
Evaluation of Student Learning: (Percentages are approximate)
- 30% Programming and other homework assignments
- 20% Labs
- 30% Midterms / Quizzes
- 20% Final

Students with Disabilities:
Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

Link to Statement of Expectations for Student Conduct, i.e., cheating policies
http://oregonstate.edu/admin/stucon/achon.htm

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