CPSC 223: Algorithms and Abstract Data Structures
SYLLABUS — Fall 2010, CRN 10980

Time and Place: Tu/Th 1:15pm-2:30pm, PACCAR 105

Prerequisites: CPSC 122, MATH 231, or consent of instructor

Instructor: Shawn Bowers
   Email: bowers@gonzaga.edu, Office: Herak 309C, Phone: (509) 313-5712

Office Hours: 3:00pm–4:00pm M–Th (subject to change). In addition to office hours, I am happy to arrange other times to meet. You can also just drop by my office. In general, the fastest way to contact me though is through email.

Course Webpage: http://www.cs.gonzaga.edu/~bowers/courses/cpsc223

Required Textbook:

Data Abstraction and Problem Solving with C++: Walls and Mirrors, 5th Edition, Carrano, Addison-Wesley, 2006

Course Materials: Lecture notes, reading assignments, homework, announcements, and general class information will be made available on the course webpage. The blackboard system will also be used (http://learn.gonzaga.edu) primarily for posting grades. There is also a Google group for the course (http://groups.google.com/group/cpsc223-f2010). Be sure to check the course webpage and the google group often for updates.

Course Description: This course covers topics in algorithms and data structures including algorithm analysis, sorting, heaps, binary search trees, hashing techniques and hash tables, and (as time permits) graphs and graph-based algorithms. The course also continues topics discussed in CS II, focusing in particular on object-oriented software design and C++ language features.

Grading:

(35%) Assignments
(10%) Group Project
(15%) Quizzes
(20%) Two Midterm Exams
(20%) Final Exam

Letter grades will be assigned based on the conventional percentage scales (A/A-: 100-90%, B+/B: 89-80%, C+/C: 79-70%, etc).

Course Policies:

Reading Assignments. Reading assignments are required (unless otherwise noted). Each reading assignment should be completed before the following class meeting.

Homework and Project Assignments. All homework and project assignments should be turned in by the given due date. Late assignments will be assessed a penalty of 20%, and must be turned
in **no later** than one week after the due date (to receive credit). If an extraordinary situation (medical, personal, work-related, or other emergency) prevents you from working for a period of time, contact me as soon as possible to discuss your situation and arrange a special schedule. It is expected that you work on homework assignments individually and that you turn in your own work (unless stated otherwise by the instructor). For group projects and assignments, you will work together with other students, and each group will turn in a single copy of their work.

**Exams and Quizzes.** Makeup exams will only be given in cases of medical, personal, work-related, or other emergencies. If an emergency arises and you are going to miss an exam, contact me as soon as possible to arrange an alternative exam time. No makeup quizzes will be given. Quizzes are generally worth 10 points each, and your lowest quiz score will not be counted in your final grade. Quizzes are worth 15% of your final grade.

**Attendance.** It is important that you attend class! If you miss 4 classes (without prior arrangement), then you will receive one grade lower (e.g., an A becomes a B). For every subsequent 2 missed classes your letter grade will be dropped one grade lower. Please notify me as soon as you can if you are sick. Sick days will not be counted as (unexcused) absences.

**Academic Honesty:** You are expected to follow the departmental policy on academic honesty:

http://www.cs.gonzaga.edu/courses/policies/honesty.html

Please read this policy prior to the next class meeting. All homework assignments, quizzes, and exams you turn in must be your work and your work alone. Similarly, each assignment turned in for the group project should be the work of the group and the group alone. Examples of academic dishonesty from the department’s policy include: “when a student turns in the work of another student and represents it as his or her own work; when a student knowingly permits another to turn in his work; when a student copies code from the work of another student; etc.” Please note that you can still have *general* discussions about assignments, e.g., concerning requirements, general implementation strategies, debugging approaches, etc. When in doubt about the policy, please ask for clarification.

If the departmental committee decides that a violation has occurred, then the following actions will be taken. If it is a first offense, a 50% point reduction on the assignment will be assigned to all students involved (i.e., “copier” and “copy-ee”). If it is a second offense, the students will receive an “F” for the course.

**Accommodation Support:** Students in need of academic accommodations should contact me as soon as possible to arrange support. Students are encouraged to contact the Disabilities Resources, Education and Access Management office in the Foley library to develop accommodation strategies. I am happy to implement any plan that you work out with this office.