Computer Science II: Data Structures and Algorithms  
CMPU-102-51  
Vassar College, Spring 2016  
Syllabus

Professor: Jenny Walter  
Office: SP 306  
Office Hours: Mondays 10:15am—12:30pm and 2:30—3:30pm  
Tuesdays and Thursdays: 1:30—3:30pm  
Phone: (845) 437-7449  
Email: jewalter@vassar.edu  
Lectures: Mondays and Wednesdays 9–10:15am, SP 309  
Labs: Mondays: 4:35—5:50pm, SP 309

Course Description:
Examines object-oriented programming, data structures and algorithms used in problem solving. Topics include fundamental data types (e.g., stacks, queues, lists, and trees), fundamental algorithms (e.g., searching and sorting), introduction to algorithm complexity, and event-driven simulation. Emphasizes abstraction, encapsulation, inheritance, polymorphism, iteration, recursion, and object-oriented design patterns and applies these ideas to sample applications that illustrate the breadth of computer science.

Resources:

On-line text:  
Introduction to Programming Using Java, version 7 David J. Eck:  
http://math.hws.edu/javanotes/

Other Resources:  
Java Documentation: http://docs.oracle.com/javase/7/docs/api/  
Java Tutorial: http://docs.oracle.com/javase/tutorial/  
ACM Student Package Documentation: http://jtf.acm.org/javadoc/student/

Labs and Homework Assignments:
Laboratory work must be done in SP 309 or 307 at the scheduled lab time. Exceptions require Professor Walter’s written permission or a valid excuse. You may work on the homework assignments in SP 309, 307 (24/7 access), or on your own personal computers. Students should implement their labs and homework using the NetBeans programming environment, which is installed on the machines on the third floor and is available for free here: https://netbeans.org.

Labs and homework assignments are absolutely necessary to learn the course material. Students should submit their lab work and homework assignments to the appropriate submission links on our class Moodle site. Solutions to labs and assignments will be available on request after the due date.
All programming assignments are due at midnight on the date specified. Assignments will generally be worth 20 points.

Late assignments will receive a 1 point penalty for every day they are late unless you have a valid excuse from health services or the dean of studies. Valid excuses must come through either Baldwin Health Services or the Dean of Studies office.

If you feel you need to hand an assignment in late, but you don't have a valid excuse, make arrangements prior to the due date with your instructor. A standard penalty of 1 point per day may still apply, depending on the situation.

Exams:

Three exams will be given in this class: two mid-term exams and a final exam. Each exam will be cumulative from the start of the semester. Students may consult the textbooks, lecture notes, personal notes, example programs and lab/homework solutions during each exam. Students will carry out small programming tasks using NetBeans, and will submit their work at the end of the class session to the appropriate submission link on our class Moodle site.

Grading Policy:

Final grades will be determined roughly according to the following weights:

- Assignments: 20%
- First Midterm Exam: 25%
- Second Midterm Exam: 25%
- Final Exam: 25%
- Labs and Lecture attendance is required and will influence final grade: 5%

Students with Disabilities:

Academic accommodations are available for students with disabilities who are registered with the Office of Disability and Support Services. Students in need of disability accommodations should schedule an appointment with Professor Walter early in the semester to discuss any accommodations for this course that have been approved by the Office of Disability and Support Services, as indicated in your DSS accommodation letter.

Classroom Etiquette:

Students are expected to attend all lectures, with exceptions permitted in case of excused illness and family emergencies. Lectures will begin on time. Students are expected to arrive on time. Professor Walter will make every effort to end each lecture on time as well. Students should not talk to each other during lectures. A student who wishes to ask a question should raise his/her hand and wait to be recognized. Students’ cell phones should be turned off during lectures.