Computer Science II: Data Structures and Algorithms
CMPU-102-51
Vassar College, Spring 2018
Syllabus

Professor:    Tom Ellman
Office:       SP 104.2
Hours:        Tuesdays and Thursdays 1:45pm to 3:45pm
Phone:        (845) 437-5991
Email:        thellman@vassar.edu
Lectures:     Tuesdays and Thursdays 12pm–1:15pm, SP 309
Labs:         Fridays: 11:00am–1:00pm, SP 309

Description:

Examines object-oriented programming, data structures and algorithms using. Topics include fundamental data types (e.g., stacks, queues, lists, trees and maps), fundamental algorithms (e.g., searching and sorting), analysis of algorithm complexity, input and output to files and streams, and an introduction to concurrency. Emphasizes abstraction, encapsulation, inheritance, polymorphism, recursion, and object-oriented design patterns. Applies these ideas to sample applications that illustrate the breadth of computer science.

Labs and Homework Assignments:

Laboratory work must be done in the Asprey Lab at the scheduled lab time. Exceptions require Professor Ellman’s permission. Students may carry out the homework assignments in the Asprey Laboratory, or on their own personal computers. Students should implement their labs and homework using the NetBeans programming environment, which is installed on the machines in the Asprey Lab 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 drop boxes on our class Moodle site. Solutions to labs and assignments will be posted on the day each lab or assignment is due.

Exams:

Four exams will be given in this class: three 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 drop box on our class Moodle.
Grading Policy:

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

- First Midterm Exam: 25%
- Second Midterm Exam: 25%
- Third Midterm Exam: 25%
- Final Exam: 25%

Classroom Etiquette:

Students are expected to attend all lectures, with exceptions permitted in case of illness and family emergencies. Lectures will begin on time. Students are expected to arrive on time. Professor Ellman 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.

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 Ellman early in the semester to discuss any accommodations for this course which have been approved by the Office of Disability and Support Services, as indicated in your DSS accommodation letter.

Equal Opportunity:

Vassar College is committed to providing a safe learning environment for all students that is free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these incidents, know that you are not alone. Vassar College has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

Please be aware all Vassar faculty members are “responsible employees,” which means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I must share that information with the Title IX Coordinator. Although I have to make that notification, you will control how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need.

If you wish to speak to someone privately, you can contact any of the following on-campus resources:
- Counseling Service ([counselingservice.vassar.edu](http://counselingservice.vassar.edu), 845-437-5700)
- Health Service ([healthservice.vassar.edu](http://healthservice.vassar.edu), 845-437-5800)
- Charlotte Strauss-Swanson, SAVP (Sexual Assault and Violence Prevention) director ([savp.vassar.edu](http://savp.vassar.edu), 845-437-7863)
- SART (Sexual Assault Response Team) advocate, available 24/7 by calling the CRC at 845-437-7333

The SAVP website and the Title IX section of the EOAA website ([eoaa.vassar.edu/title-ix/](http://eoaa.vassar.edu/title-ix/)) have more information, as well as links to both on- and off-campus resources.