

# Abstraction, Data Structures, and Large Software Systems: CSCI-200 – Fall 2017

Dr. Imad Rahal

## VITAL INFORMATION

Class: **Tuesday & Thursday 9:35am–10:55am, Peter Engel Science Center 238, SJU**

Lab: **Wednesday 8:00am–10:05am or 1:50pm–3:55pm, Peter Engel Science Center 212, SJU**

Office: **Peter Engel Science Center 211, SJU**

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Office Hours: **Tuesday & Thursday: 2:20pm–3:00pm, Wednesday: 10:20am–11:15am, or by appointment** (Note that office hours are times when I am MOST likely in my office but are NOT promised; please contact me before coming to see me)

## TEXT BOOK

**(Recommended but NOT required)** *Data Structures: Abstraction and Design Using Java* (Version 2E) by Koffman and Wolfgang

## DESCRIPTION & OBJECTIVES

This course engages students in solving relatively complex computing problems that require writing large computer programs, making it necessary to understand program efficiency, master data structures and rely on software engineering techniques such as requirement and design specification, software reuse, software testing, and program verification.

To meet the objectives for this course, students will be able to

- produce efficient, functional, well-tested, medium-scale programs in the Java programming language;
- apply fundamental software engineering techniques to problem solving;
- describe, implement and use major computer data structures;
- recognize and apply appropriate ways to decompose a complex problem into tractable parts which can be solved and combined to solve the original problem; and
- write clearly and accurately about programs and the programming process.

## EVALUATION

**Attendance:** Attendance to **ALL** class and lab meetings is required. Unexcused absences will result in lowering the student's final grade, in addition to the loss of points incurred by not completing class/lab work on time. Valid excuses mean things like documented illness or death in your family, prearranged absences because of varsity athletic events (NOT practices) or other performances. Habitual tardiness will be treated as absences.

**Labs:** There will be one 125-minute lab scheduled each week for students to complete in (preassigned) pairs. A lab typically consists of a set of self-contained exercises to be worked on during

the lab period and completed by the start of the next scheduled lab; no credit will be given for late labs. Students who miss a lab or leave early without a valid excuse will not get any credit for that lab. It is estimated that each lab will require between 4 and 8 hours of work to be completed.

**Exams:** There will be three in-class exams along with a final exam.

Grading is mainly based on the performance of each student compared to the class as a whole. Final grades for the course will be computed based on the following percentages:

Participation	02%
Labs	30%
Project	08%
Exams (3 total as follows):	
lowest:	10% 38%
median:	13%
highest:	15%
Final Exam (comprehensive)	22%

In general, the following guidelines will apply except in certain situations where the instructor sees a need for adjustment. ***A failing grade (F) will likely be given in situations of frequent unexcused lab/class absences, unsuccessful completion of required work in a timely manner, or evident lack of understanding of core material as illustrated by exam scores (e.g., failing all exams will result in an F grade regardless of your total final score).***

A	>=92%	Highly competent performance
AB	>=88%	
B	>=82%	Fairly competent performance
BC	>=78%	
C	>=72%	Fair comprehension of the material
CD	>=68%	
D	>=60%	Partial comprehension of the material
F	<60%	Unsatisfactory Performance

## SPECIAL ACCOMMODATIONS

Student needing special accommodations or who have special needs are invited to share this information with the instructor as early as possible.

## ACADEMIC HONESTY

Work must be completed in a manner consistent with CSBSJU's code for academic honesty. All outside work or ideas used in any part of this course must be properly attributed; all forms of plagiarism including but not limited to copying ideas, written works, spoken words or computer files from other people are strictly prohibited. All acts of plagiarism, cheating, or other academic misconduct are considered forms of academic dishonesty and are strictly prohibited. Such instances will be reported to the appropriate personnel and officials. Please refer to the most recent version of CSBSJU's Academic Catalog for further relevant information and guidelines on this important matter.