

# CSI 403 – Algorithms and Data Structures – Fall 2016

## Course Syllabus

**Instructor:** Petko Bogdanov  
UAB 416  
pbogdanov@albany.edu

**Office Hours:** Tue – 1pm to 3pm  
Thu – 1pm to 3pm  
or by appointment

**Prerequisite:** CSI 210 (Discrete Structures) and CSI 213 (Data Structures).

### Teaching Assistants:

Ashish Jadhav (ajadhav2@albany.edu), Office hours: Tue,Thu 10:30am-11.30am.

Zumrut Akcam (zakcam@albany.edu), Office hours: Tue 3-4pm and Wed 11am-12pm.

**Required Text:** Thomas H. Cormen Charles E. Leiserson Ronald L. Rivest Clifford Stein, “Introduction to Algorithms: Ed. 3”, MIT Press

**Course Objectives :** To expose students to a variety of techniques for the design and analysis of efficient algorithms.

### Evaluation:

Midterm	–	Oct. 17, 2016 (M)	:	In class	–	20%
Final	–	Dec. 2016 (TBD)			–	30%
Programs (2)	–				–	20%
Homework (best 5 out of 6)	–				–	30%

**A. Exams:** As shown above, there will be a midterm and a final. These are **open text** exams. Other details about the exams will be announced later.

**B. Programming Assignments:** There will be two programming assignments. These assignments will involve the implementation and comparison of algorithms. You are required to write the programs in Java. These programs must be done using the CS department Linux machines (or compatible environments). We will provide test input and output, but will verify your submissions on different inputs. Your programs should produce output as specified in the requirement and should compile. Non-compiling programs on the department Linux boxes will be scored 0 points (i.e. feel free to develop them on any machine, but make sure they can be run on dept. machines by ACTUALLY checking this before submitting.)

Programing assignments are INDIVIDUAL assignments! Suspiciously similar programs (especially those producing similar errors) will be reviewed for plagiarism (See E. below). Taking the code from an online source is also plagiarism!

Assignments and submissions will be handled through Blackboard.

**C. Homework:** Six sets of equally weighted homework problems will be given during the course. You will have about a week for each set. These homeworks will be graded and we will use the *best 5* of your scores in the 6 homeworks to determine the numerical grade for

the homework. There will be no make-ups for homeworks. If you skip one you can still get a perfect score if acing the rest, but do not intentionally skip one, better ace all of them!

The problems will consist of thought exercises. A number of them will require you to provide rigorous proofs. You are strongly advised to solve the problems by yourself. Solving the problems on your own will provide you with a better understanding of the course material. Post clarification requests to me or in the forum of Blackboard.

Assignments and submissions will be handled through Blackboard.

**D. Make-up Exams:** Make-up exams will be given only for valid and verifiable excuses (e.g. a major medical situation). If you are going to miss an exam, you must contact your instructor *ahead of time* and arrange to take a make-up exam at an alternate date/time.

**E. Policy on Cheating:**

1. Cheating in an exam will result in an E grade for the course. Further, the students involved will be referred to the Dean's office for disciplinary action.
2. Homework exercises and programming assignments are meant to be *individual exercises*; you must do these by yourself. Cheating in a homework exercise or programming assignment will result in a ZERO for that homework or program for *all* the students involved. Students who cheat in two or more homeworks/programming assignments will receive an E grade for the course. The names of such students will also be forwarded to the Dean's office for disciplinary action.

**F. Policy on I grades:** A grade of **I** will only be given for genuine extenuating circumstances that are beyond your control after the midterm point. Both of the following conditions must be met:

1. Your work must be in good standing as of October 17, 2016, the day of midterm exam; that is, you must have an average score of at least 50% on homework assignments and at least 50% on the programming assignments completed up to that point. Further, your midterm grade must also be equivalent to at least a **C**. Therefore, if you miss the midterm or have hardly turned in homeworks or programming assignments, you are not eligible for an **I** grade.
2. Written documentation must be supplied about the extenuating circumstance either by you or the University administration.

Under no circumstances will the condition for completing an **I** grade be that the entire course be retaken later without a new registration.

**G. Attendance:** Although class attendance is not required, you are strongly urged to attend the lectures. The course is mathematical in nature and uses many concepts that you learnt from your Discrete Structures class (CSI 210). Reading the material from the text ahead of time and carefully listening to the lectures is the best way to understand the material.

If you miss a class, it is your responsibility to find out the material covered in the class. It will *not* be possible for your instructor to conduct makeup classes.

**GOOD LUCK!**