

COSC 445 – Design and Analysis Presentations!

Spring 2018

Objective: Present a concept that we didn't go over in class, in a lecture format!

Your Task: In teams of 3 or 4 you will do the following:

- * Research your selected topic. Topics will be picked in random group order during class on 4/5.
- * Develop a 40-minute long lecture to be presented in class during the last two weeks of class. This should be a summary of the topic, including any background material, and an in-depth discussion of at least one specific example. If you have selected a topic that includes a specific algorithm, your example must be that algorithm. You may develop class exercises to include in your lecture, but keep in mind that your lecture must be comprehensive, so utilizing a lot of time on exercises may not be in your best interest.

You will be graded on clarity of your lecture, content and length, balance amongst your group members, your deliverables, and your team reviews. Your fellow classmates and your instructor will be grading you on your presentation.

Team reviews must be submitted before your lecture and should consist of an email containing a numeric grade (0-100) and justification for each of your group members. Do not grade yourself.

Topics: Here are the topics to be chosen from:

- * Shor's algorithm/quantum computing
- * Self-stabilizing algorithms
- * Monte Carlo and Las Vegas algorithms
- * Raptor codes and tornado codes
- * The Cole-Vishkin algorithm/parallel algorithms
- * PSPACE complexity and its relation to NP.
- * Approximating traveling salesperson
- * Combinatorial computational geometry and mesh generation

Expectations: A clear, professional lecture. You will turn in your slides via Blackboard by 11:59pm the night before your lecture. You will submit your team reviews before your lecture.

Group Stuff: By 5pm, 4/3, you may email me a list of up to 2 people that you do not want to work with. I will announce group assignments in class 4/5, at which point we will do the topic lottery.

NOTE: You will be assigned your presentation day the day that topics are assigned. It will be during the final two weeks of the semester. Presentations start 4/17.