

# FINAL EXAM STUDY GUIDE AND END-OF-TERM INFORMATION

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## 1. SCHEDULE

The final exam will be take-home. It will be available at the course website (or on the K-drive) at 10:00 am Saturday April 25 and be due Tuesday April 28 at 3:00 pm.

The completed exam, in PDF form, must be uploaded into your K-drive space by 3:00 pm on the day due to be graded. If for some reason you cannot do a PDF, clear photographs or scans of all pages in JPG form will be accepted.

## 2. REDISTRIBUTION OF POINTS

Grades will be computed based on your scores on projects, quizzes and tests as follows

COURSE UNITS	WEIGHT/UNIT	Total Weight
5 Projects	9 % each	45
3 Quizzes	6 % each	18
1 Test	12%	12
1 Final Exam	23 %	23

This adds up to 98%. The remaining 2% points are free, to help offset the disruption to learning caused by the unusual events of this semester.

## 3. LIST OF TOPICS FOR FINAL EXAM

The final exam will be comprehensive, meaning it will cover everything from the beginning of the semester to the end. However, you should expect a greater focus on topics covered late in the semester, including dynamic programming, greedy algorithms, and NP completeness.

For NP Completeness, you need to understand the basic definitions, the problems in NP that we covered in class: HAMILTONIAN PATH, HAMILTONIAN CYCLE, CLIQUE, INDEPENDENT SET, and VERTEX COVER.

You should make sure you understand the SATISFIABILITY problem, and have a good idea how you can devise clauses to represent any problem in NP.

Other important topics are solution of recurrence relations to determine the complexity of an *divide and conquer* algorithm, graph traversal (DFS and BFS), and backtracking.