

Program Competencies

In-depth familiarity with areas of theoretical computer science as they relate to the design and analysis of algorithms.

Course Competencies

Algorithms Analysis: Asymptotic Complexity, Big-Oh, Big-Theta, Big Omega.

Algorithm Analysis: Recurrence relations, Master Theorem.

Advanced Data Structures.

Sorting Algorithms.

Divide and Conquer Algorithms.

RSA Encryption.

Dynamic Programming.

Tree Traversals and Graphs: Depth First Search, Breadth First Search, Strongly Connected Components, Articulation Points.

The Kruskal, Prim, and Dijkstra Algorithms.

Linear Programming, Network Flow.

Computational Complexity: NP-

Examinations

Two quizzes. (each counts for 2.5% of the grade.) Length 15 minutes each.

Exam 1 (not cumulative, counts for 10% of the grade.) Length 75 minutes.

Exam 2 (not cumulative, counts for 10% of the grade.) Length 75 minutes.

Final Exam (cumulative, covers all material, counts for 15% of the grade.) Length 120 minutes.

Academic Dishonesty

Details are in section “University Policies”. Use of sites such as Chegg and Course Hero is considered academic misconduct.

Grading Scale

A	> 89
A-	85 – 89
B+	81 – 84
B	73 – 80
B-	70 – 72
C+	67 – 69
C	63 – 67
C-	60 – 62
D	50 – 59
D	64 – 66
D-	60 – 63
F	< 50

University Policies

Public Health Directives

Face coverings are currently mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional

excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate's policy, and an infringement on the student's right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

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