ICS C255: ALGORITHM DESIGN

Item	Value
Top Code	070200 - Computer Information Systems
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

This course introduces algorithm design strategies and their applications in solving common computational problems. Key topics include analyzing the asymptotic behavior of algorithms and exploring core design paradigms such as brute force, exhaustive search, divide-and-conquer, dynamic programming, greedy techniques, backtracking, and branch-and-bound approaches. The course also covers intractability, including NP-complete problems, and introduces parallel and distributed computing concepts to address computational efficiency in complex problem-solving. ADVISORY: ICS C123 and ICS C141 and CIS C157 and a course taught at the level of college algebra or appropriate math placement. Transfer Credit: CSU.

Method(s) of Instruction

- Lecture (02)
- DE Delayed Lecture (02D)
- DE Online Lecture (02X)