CMPT 705 - G100 Design/Analysis Algorithms

Instructor(s): Valentine Kabanets

SFU Burnaby

Calendar Objective/Description:
Design/Analysis Algorithms

Instructor's Objectives:
This is an introductory graduate course on algorithms. We will review basic paradigms of algorithm design (greedy, dynamic programming, backtracking, linear programming, etc.), as well as explore some of the more advanced topics (e.g., randomized algorithms, approximation algorithms, streaming algorithms, etc.)

Prerequisites:
see go.sfu.ca

Topics:
- Greedy Algorithms
- Dynamic Programming
- Network Flow
- Linear Programming
- Approximation Algorithms
- Local Search
- Randomized Algorithms
- NP-Completeness

Grading:
To be announced during the first week of classes.
Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass (C- or better).

Required Books:
Algorithm Design, J. Kleinberg, E. Tardos, Addison-Wesley, 2006, 9780321295354

Reference Books:

Academic Honesty Statement::
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).