CSIT113
Problem Solving

Course Introduction and Overview

Lecturer/Tutor: Dr Tan Hee Beng Kuan
(email: hbktan@uow.edu.au)

Course Overview

Unit 1 – Introduction
Unit 11 - Wicked Problems
Unit 2 - Brute-Force versus Finesse
Unit 3 - Reasoning Using Logic
Unit 4 – Induction
Unit 5 - Greedy Approach
Unit 6 - Reduce-and-Conquer and Divide-and-Conquer
Unit 7 - Searching and Sorting
Unit 8 -Graphs and Trees for Modelling
Unit 9 - Coping with Complexity using Backtracking
Unit 10 -Coping with Complexity using Branch and Bound

Scope of This Course

- Study fundamental and general methods for solving CS/IT problems.
- Most of these methods will address combinatorial problems, very important type of problem in CS/IT.

Assessment

- Continuous Assessment (CA): 50%; Exam:50%; Technical Fail applies.
- CA:

Type	Percentage
Quizzes (8 quizzes)	16% (2% each)
Assignment 1	8%
Assignment 2	8%
Assignment 3	8%
Mid-Term Test	10%

Continuous Assessment

- All CA will be carried out in Moodle via the course website in Moodle.
- Quizzes: Two types: MCQ and Short Answer Questions; **for short answer questions, all answers must follow the formats stated in the questions without any working steps and no other options allowed**.
- Assignment:
  - **The answer for each question must be submitted in one separate PDF file in the answer box provided by the question.** For example, 8 questions will require 8 separate PDF file.
  - Though there is no requirements imposed by Moodle, you can name your file by assignment no appended with your name, e.g., A1JohnTan.
- Mid-Term Test: Two types of questions, same as Quizzes. **To be conducted in a Lecture. Students must bring their own laptops to the lecture for the test.**

References

- No Textbooks for this course.
- There isn't major references for this course too.
- Can take a look of Anany Levitin, Introduction to the design and Analysis of Algorithms if you are keen