## 97-2 Preliminary Syllabus, Da-Yeh Univ

Information				
Title	離散最佳化	Serial No. / ID	1336 / IFR5120	
Dept.	資訊工程學系碩士班	School System / Class	研究所碩士班1年1班	
Lecturer	程仲勝	Full or Part-time	專任	
Required / Credit	Optinal / 3	Graduate Class	NO	
Time / Place	(—)234 / H705	Language	English	

## Introduction

This course introduces the important idea of the computational complexity in computer science, and how to solve the engineering optimization problems by using the mathematical programming methods. This course is intended to provide students with an overall de s c r i p t ion of optimization problems and to enable them to understand the nature of optimization problems. It is greatly helpful to the students for their future engineering research.

## Outline

- 1. Optimization Problem Overview
- 2. Computational Complexity
- 3. Mathematical Programming
- 4. Duality Theorem
- 5. Primal-Dual Algorithms
- 6. Matching problems
- 7. Spanning Trees and Matroids
- 8. Approximation Algorithms
- 9. Branch-and-Bound Algorithms
- 10. Dynamic Programming Algorithms
- 11. Local Search
- 12. Simulated Annealing and Genetic Algorithms

Prerequisite	
NA	