

一、課程說明(Course Description)

This course gives an introduction to the essentials of discrete mathematics.

二、指定用書(Text Books)

K. H. Rosen, *Discrete Mathematics and its Applications*, 6th ed. McGraw-Hill, 2007.

三、參考書籍(References)

E. Gossett, *Discrete Mathematics with Proof*, Prentice Hall, 2003.

四、教學方式(Teaching Method)

3-hour lecture per week

五、教學進度(Syllabus)

1. Chapter 1: The Foundations: Logic (4 hours)
2. Chapter 2: Basic Structures: Sets, Functions, Sequences, and Sums (5 hours)
3. Chapter 3: The Fundamentals: Algorithms and the Integers (9 hours)
4. Chapter 4: Induction and Recursion (7 hours)
5. Chapter 5: Counting (7 hours)
6. Chapter 7: Advanced Counting Techniques (7 hours)
7. Chapter 9: Introduction to Graphs (4 hours)

六、成績考核(Evaluation)

Homework (20%) Midterm I (25%) Midterm II (25%) Final Exam (30%)

七、可連結之網頁位址

<http://ecc.ee.nthu.edu.tw>