

Discrete Mathematics 離散數學

(705 12100)

Spring 2011

Time and Place

Lecture: Tuesday 14:20 – 17:20; Room 101, Building 1, College of Management.

Lab: Tuesday 17:30 – 18:20; Room 101, Building 1, College of Management.

Course Web Site

<http://www.iis.sinica.edu.tw/~trc/public/courses/Spring2011/>

Instructor

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Office hours: By appointment only (Friday 9:10 – 10:00; Room 716, Building 1, College of Management).

Office phone numbers: 02-3366-1200 ext. 20 (office hours only), 02-2788-3799 ext. 1613 (Academia Sinica).

Teaching Assistant

李明洪 (Ming-Hung Li), e-mail: r98725052@ntu.edu.tw

Office hours: Tuesday 10:00 – 11:00; Room 112C, 教學館. Mobile phone number: 0931-061-053.

Schedule (subject to adjustment)

02/22 Formal Logic; Propositional Logic. (1.1–1.2)

03/01 Predicate Logic; Logic in Mathematics; Methods of Proof. (1.3–1.5)

03/08 Graphs; Sets; Functions. (2.1–2.3)

03/15 Relations and Equivalences; Partial Orderings. (2.4–2.5)

03/22 Graph Theory; Recurrence Relations. (2.6; 3.1)

03/29 Closed-Form Solutions and Induction; Recursive Definitions. (3.2–3.3)

04/05 (*no class on 04/05*)

04/12 Proof by Induction; Recursive Data Structures. (3.4–3.5)

04/19 mid-term examination

04/26 *Introduction to (Python) Programming*

05/03 Basic Counting Techniques; Selections and Arrangements. (4.1–4.2)

05/10 Computing with Functions; Discrete Probability. (4.3–4.4)

05/17 Counting Operations in Algorithms; Estimation. (4.5–4.6)

05/24 Algorithms; Three Common Types of Algorithms; Algorithm Complexity (5.1–5.3)

05/31 Bounds on Complexity; Program Verification; Loop Invariants (5.4–5.6)

06/07 Thinking Through Applications (I)

06/14 Thinking Through Applications (II)

06/21 final examination

Textbook

David J. Hunter. *Essentials of Discrete Mathematics*. Jones & Bartlett Learning, 2009. ISBN-10: 0763748927.

Website: <http://www.jblearning.com/catalog/9780763748920/>

Errata: http://www.westmont.edu/~dhunter/edm_errata.pdf

Grade

Homework (40%) and examination (60%).