Course Name:

Introduction to Computer Science, Fall 2005 計算機概論

Instructor:

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Associate Professor

Office:

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Textbook: 1. Foundations of Computer Science, by Behrouz A. Forouzan,
Brooks-Cole, Pacific Grove (歐亞書局代理)

Grading:

1. Homeworks 30%
2. Quizzes 30%
2. Midterm Exam 20%
3. Final Exam 20%
4. Class Interaction (+10%)
Total 100%

Objective:

Computers are integral parts of our lives. This course is an introduction to general computing and the science involved within. This course will address the following questions: What is a computer and computer science? How does a computer work? How can one use computers to their advantage and how do we go about the process of computing? What are a computer’s limitations and how can we
address these pitfalls? Why should we know about computer science? What is the future of computer science?
The course is designed:
1. To provide fundamentals of and a general background in computer science for beginners in this discipline;
2. To introduce some general computer applications (Internet and e-mail, word processing, spreadsheets, PowerPoint, databases, networks, web page design);
3. To familiarize one with the computer programming concepts;
4. To introduce computer architecture and hardware designing techniques.

**Attendance**: Attending all lectures is essential; the assignments and exams, etc. will be based primarily on the material presented in the lectures. Also, assignments due dates, explanation, clarification of assignments, and material outside textbook will be presented during lectures and lab sessions. If you miss a lecture or a lab session, it is your responsibility to obtain the information covered in the session from your fellow classmates.

**Homework Assignments and Examinations**: There will be about 6 homework assignments, due at the beginning of the lecture period of the due date. *No late assignment will be accepted*. The homework is a crucial tool for learning the material taught in the lecture. Therefore, it is very important that you do the homework **on your own**.

**Student Responsibilities and Academic Honesty**: As a college student who is committed to seek a higher education, we expect you be a very responsible person. At the least, please:

- Do your best to understand the material covered in the class and ask questions, when you do not understand.
- Be aware of the homework assignments and deadlines.
- Turn in your assignments in neat, readable and easily accessible form.
- Obtain notes and handouts from your classmates if you miss a class for unavoidable circumstances.

Also we expect all students to have the highest level of academic **honesty**: you to do your assignments, lab exercises, exams etc yourself. We strongly encourage you to discuss with the instructor(s) regarding any problems that you might have in the course work. However, in fairness to all, if we find two or more assignments which appear to be **copied** from each other, we will split the points evenly among all those involved (no matter who copied from whom). Repeated incidents will be dealt with severe disciplinary actions.
Course Outline:

- **Part I Computer and Data**
  - Introduction on Essential Concepts
  - Data Representation
  - Number Representation
  - Operations on Bits

- **Part II Computer Hardware**
  - Computer Organization
  - Computer Networks

- **Part III Computer Software**
  - Operating Systems
  - Algorithms
  - Programming Languages
  - Software Engineering

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### Introduction to Computer Science

#### Course Schedule, Academic Year 2005

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