Introduction to Computer Science

Polly Huang

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Class Administration

Vital Information

- Course   : 計算機概論
- Taught by   : 黃寶儀
- Class No.   : EE1003
- Session No.   : 03
- Class ID   : 901 E10110
- Credit   : 3 units

For Most of You

- (Most probably) the first non-English course instructed fully in English

- All written communication in English
  - Assignments, exams, emails, etc
- All oral communication in English
  - Lectures, off-class discussion, office hours, etc

Be Aware

* Assignments and exams are accepted only in English
* Credits are granted only when the English is comprehensible

Though to avoid confusion…

* Please make sure your names are clearly printed in Chinese for all the assignment submissions.

Think of it this way:
(for domestic students)

I get to be an exchange student
without going physically abroad.

Alternatives

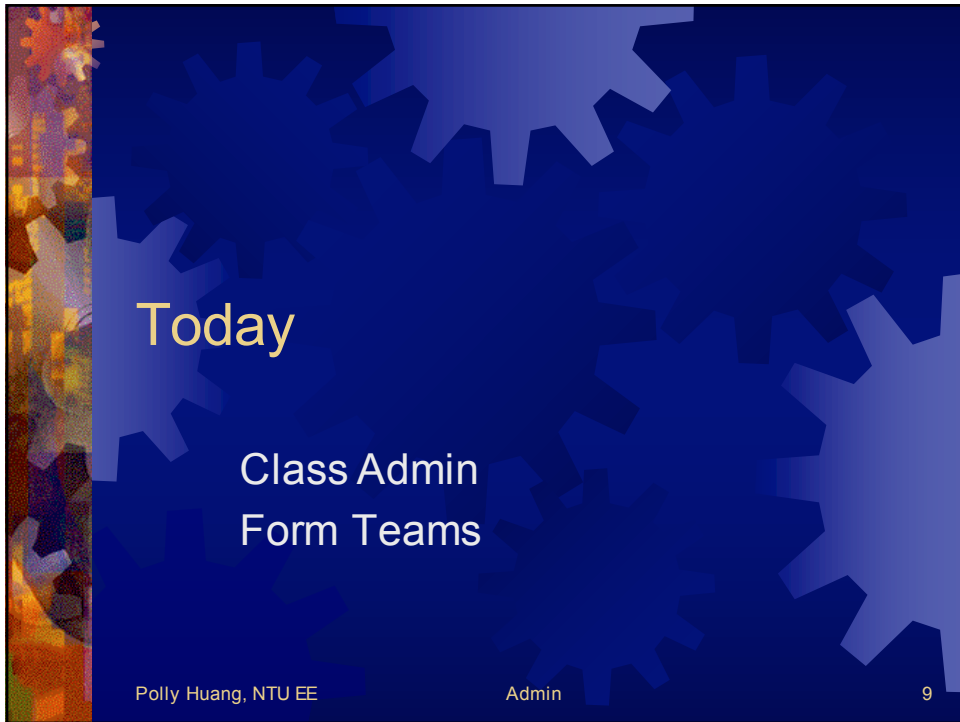* This course is offered with multiple
  sessions (in Mandarin Chinese!).

Today

Class Admin
Form Teams

Roadmap

- **The essentials**
- Administrative Information
- Content
  - Course objective and scope
  - Syllabus
- Your responsibility
  - Homework, exams, etc
  - Grading policy
- Class material

The Essentials

* Course page
  * http://homepage.ntu.edu.tw/~pollyhuang/teach/intro-cs-spring-17/

* Polly Huang
  * http://homepage.ntu.edu.tw/~pollyhuang
  * Click the 'teaching' link
  * Click the 'Spring 2017' link
  * Under the 'Introduction to Computer Science (EE Major)' category

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Lecture Info

- Location
  - BL-212
- Time
  - Tuesday, 1:20-2:10
  - Wednesday, 3:30-5:20

The Instructor

- Polly Huang
  - Office: BL-613
  - Phone: 33663599
  - Email: pollyhuang@ntu.edu.tw
  - Homepage:
    http://homepage.ntu.edu.tw/~pollyhuang

Office Hour

- Wed 12-1
- Or by appointment

The TA

- It'll be just Polly.

Prerequisite

- Computer Programming

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Nature

* An introductory course on computers
* For EE students

Objectives

* Getting the big picture
  * Area of research and development in computer science
* Knowing the basics
  * Terminologies
  * Principles
  * Mechanisms and basic theories

Scope: Pre-Midterm

- Fundamentals
  - Data storage
- Systems
  - Computer architecture
  - Operating system
  - Networking

Scope: Post-Midterm

- Science
  - Algorithm
  - Programming languages
  - Theory of computation
- Areas in CS
  - Artificial intelligence

Schedule: Pre-Midterm

2/21-22	Admin
2/28-01	History & Data storage
3/07-08	Data storage & Computer architecture
3/14-15	Computer architecture
3/21-22	Operating system
3/28-29	Project idea presentation
4/04-05	Operating system
4/11-12	Operating system
4/18-19	Midterm

Schedule: Post-Midterm

4/25-26	Networking
5/02-03	Networking
5/09-10	Networking
5/16-17	Algorithm
5/23-24	Algorithm
5/30-31	Programming languages
6/06-07	Project demo/presentations
6/13-14	Theory of computation
6/20-21	Final

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Grade by **Curve**

* Working in a team (50%)
  * Creativity project (20%)
  * Essays (20%)
  * In-class quiz (10%)
* Working as an individual (50%)
  * Exams (40%)
  * Class participation (10%)
* Grade by curve
  * Percentile compared to all in class

1 Creativity Project

* Creativity project
  * Select a problem. Solve the problem!
  * Either software or hardware solutions are fine
* To fulfill the requirement
  * Mid semester (10%)
    * Problem, solution, and tools (programming tools, devices)
  * Semester end (10%)
    * Result and demo

Essays

* 4 Essays
  * Assigned topic
  * Search for additional material (google or else)
  * Read and discuss as a group
  * Set your storyline
  * Write an essay about it
* To fulfill this requirement
  * 3-page write-up (each 5%)

In-Class Quiz

- Random quiz
  - Problem related to the topics of the week
  - Given time to work on in class
- To fulfill this requirement
  - Share your solutions in class
  - Submit offline/later ok
  - Graded by curve at the semester end (10%)
- Top sharers get special award

Team Up

- 1-3 students per team
  - No more
- Same members for
  - Creativity project
  - Essays
  - In-class quiz

2 Exams

- In Q&A form
  - Mostly from Questions/Exercises from the textbook
  - Solutions available in the back
  - Just to make sure you understand the material
- To fulfill this requirement
  - Midterm (20%)
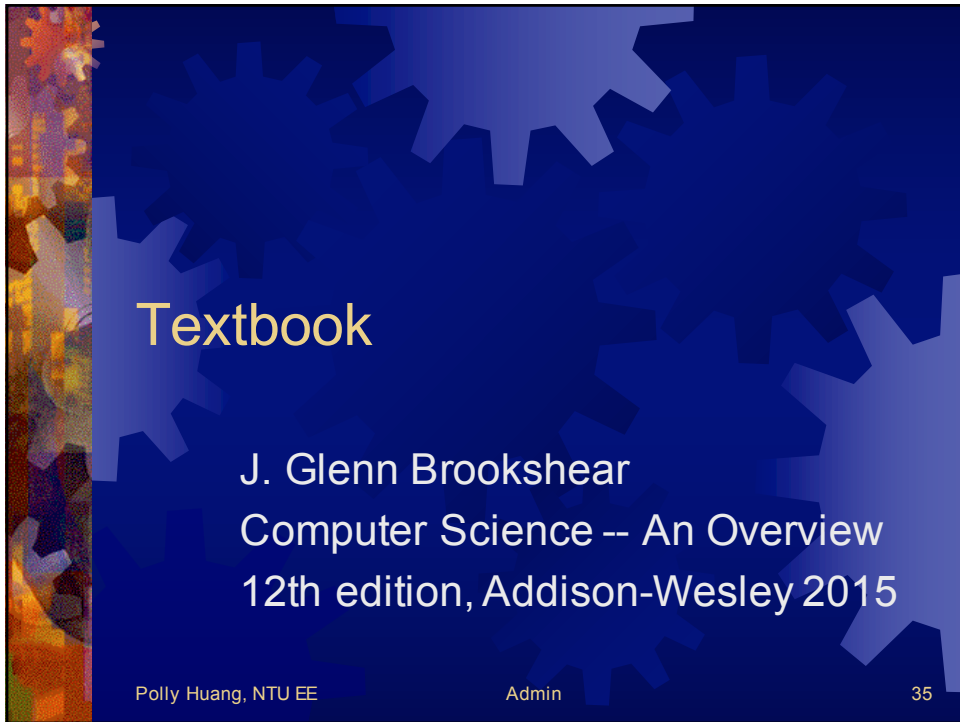 - Final (20%)

Participation = Speaking Up

- It only helps
- There's no stupid questions

- Participation ≠ Attendance

Integrity

- Respect yourselves
  - For example, it'd be suspicious if the writing of the papers is too good…
  - You know how to google. We know, too.

- Polly is not nice!

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Textbook

J. Glenn Brookshear
Computer Science -- An Overview
12th edition, Addison-Wesley 2015

Questions?

Quiz Time!