Introduction to Computer Science

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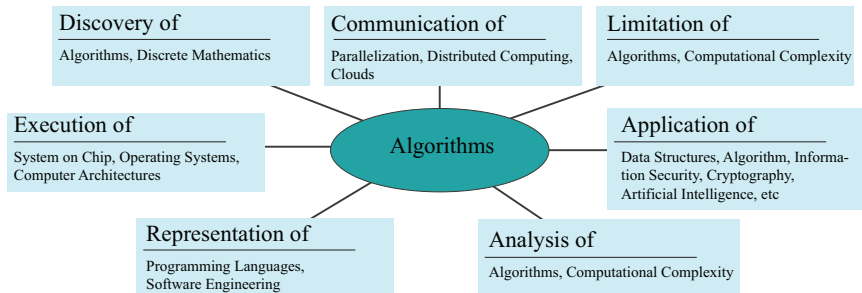National Taiwan University

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Welcome

- Course Name: Introduction to Computer Science.
- Agenda
  - Administrivia.
  - Course objectives.

Administrative Information

- Course website (CEIBA)
  - `https://ceiba.ntu.edu.tw/1032_i2cs`
- Grading
  - Homework (Review questions from the textbook and C/C++ programming)
  - Midterm (04/22, in-class, closed book)
  - Final (06/24, closed book)
  - 30%, 35%, and 35%, where 30% is applied to the lowest.
- Auditing is welcome; send me an email of your name and student ID so that I can create a CEIBA account for you.

What is this Course About?

- The science concerning computers.
  - Fast, but inaccurate (due to limited resources) computation.

Discovery of	Communication of	Limitation of
Algorithms, Discrete Mathematics	Parallelization, Distributed Computing, Clouds	Algorithms, Computational Complexity

Execution of
System on Chip, Operating Systems, Computer Architectures

Algorithms

Application of
Data Structures, Algorithm, Information Security, Cryptography, Artificial Intelligence, etc

Representation of
Programming Languages, Software Engineering

Analysis of
Algorithms, Computational Complexity

Course Materials

- Textbook
  - J. Glenn Brookshear, Computer Science – An Overview, 11st edition, Addison-Wesley.
  - Other editions are O.K., but you need to deal with the differences such as homework.
- Main material: Course slides.
- Supplemental materials
  - Any C/C++ programming guide.
  - http://www.cppreference.com/
  - C++ Primer (Pearson Addison Wesley).

Prerequisites & Goals

- Activeness, Enthusiasm, and Curiosity.
- Basic knowledge of C/C++ programming.

- My goal is to let you
  - Understand basic knowledge about computers.
  - Be aware of different fields in computer science.
  - Be a stronger programmer.
- What is your goal?

Teaching Policy

- I don't mind students being late or absent. You are adults; use your time well.
- You won't be punished for napping, but that does drain my energy and affects my teaching quality. Feel free to leave for a while to refresh.
- I do ask you not to bother others. That means, do not use cell phones, or constantly talk loud. Your classmates have the right to learn in a quiet environment.

Grading Policy

- I don't change grades unless mis-grade or miscalculations.
- I don't change grades no matter what after one week since the announcement.
- I give partial credits. So do write down anything as best as you can (related to the question) even if you are not sure of it.
- Hand in your assignments on time. You will be punished for delay.
  - Grade = original_grade $\times$ (1- 0.15 $\times$ days_of_delay)
  - Grade = 0, if days_of_delay $\geq$ 7.
- I use ceiba for assignment hand-in.
  - Hand in only one file on ceiba.
  - Hand in an O.K. version before the deadline.
  - If ceiba hangs, send your assignment via email to me and CC to TA.

Cheating Policy

- Cheating is an unwelcome behavior of dishonor and disgrace; it wastes your valuable time as well as mine.
- In short, its very bad, and I stand firm against it.
- It is your responsibility to protect your homework, assignments, etc.
- This is not a game. Cheating without being caught does NOT mean you win. In fact, you can't really win anything by cheating.

- Discussion is very different from cheating. You may discuss your homework with classmates, TA, or me. Remember, you may learn from others, but do it yourself.

Need Help?

- Ask your classmates, TA, or me.
- Use the forums on ceiba.
- Join the group discussion.
- Schedule a meeting with me via email.

Scared of English?

- Do not consult a dictionary every time you see a new word.
- Consult a dictionary only when this new word occurs many many times, or it is a keyword.
- When you look up a new word in a dictionary, pay attention to its pronunciation and example sentences. Do not memorize its Chinese meaning only.