

CSIS/COMP 1117B

Computer Programming

Course Description

Course Description

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- Course schedule
- Course requirements
- Our team
- Our objective

Course Contents

- Basic (and advanced) features of the C/C++ programming language.
- Syntax, identifiers, data types, control statements, functions, arrays, file access.
- Objects and classes, class string, structures and pointers.
- Programming techniques such as recursion, linked lists and dynamic data structures.
- Program design, implementation and debugging, with emphasis on problem-solving.

Detailed Topics

1. Overview (0.5 lecture)
2. C++ Basics (1 lecture)
3. Numbers (1 lecture)
4. Flow of Control (1 lecture)
5. Functions (1 lecture)
6. Arrays, searching and sorting (1 lecture)
7. Streams and file I/O (1 lecture)
8. Classes and structures (1 lecture)
9. Strings and vectors (1 lecture)
10. Pointers and dynamic arrays (1 lecture)
11. Linked lists (1 lecture)
12. Inheritance (1 lecture)

Textbook

- Walter Savitch, *Problem Solving with C++*, 8/E, Addison Wesley, 2012.
- Highlights:
 - aimed at novices
 - step-by-step approach
 - easily to understand
 - many examples
 - comprehensive
 - extensive programming tips



Course Schedule

- The first week:
 - today 11:30 -- 12:20, Introductory lecture (CPD-LG.07)
 - Thursday 10:30 -- 12:20, lecture (CPD-LG.07)
- From next week onwards:
 - Monday 10:30 – 11:20, Workshop 1
 - Monday 11:30 – 12:20, Workshop 2
 - ***select your preference in Moodle and we will post the result later***
 - Thursday 10:30 – 12:20, lecture (CPD-LG.07)
- **No** workshops on October 6:
 - Monday 11:30 – 12:20, lecture (CPD-LG.07)

Course Requirements

- 10 workshops
 - attendance (5%)
 - exercises (5%)
- 4 assignments (20%)
- Midterm test (20%)
- Final examination (50%)

Late Policy

- 20% off for the delay of each calendar day.
- Re-submission before the deadline is allowed.
The **latest** submission will be marked.

Department Policy of Plagiarism

- First attempt:
 - written warning
 - 0 mark
 - referred to program director
- Second attempt:
 - referred to University Disciplinary Committee
 - published reprimand
 - possible:
 - suspension of study
 - expulsion

Our Team

- Instructor: Dr CHONG, Chan Fung (chong@cs.hku.hk)
 - office location: CYC 306
 - phone number: 2859-7070
 - office hour: 10:00am – 11:00am Tuesday and Thursday
- Teaching assistants:
 1. Ms. CHENG, M.Y. Jolly (mycheng@cs.hku.hk)
 - office location: CYC 319
 - phone number: 2857-8263
 - office hour: 11:30am – 12:30pm, 1:30pm – 2:30pm Friday
 2. Mr. TANG, Zhihao (zhtang@cs.hku.hk)
 - office location: LG 101
 - phone number: 2857-8465
 - office hour: 4:00pm – 5:00pm, Tuesday
 3. Mr. YIN, Pengcheng (pcyin@cs.hku.hk)
 - Office location: CYC 415
 - Phone number: 2241-5675
 - Office hour: *to be announced*

Our Objective

- To prepare you for some core courses:
 - COMP 2119 Introduction to Data Structures and Algorithms
 - COMP 2123 Programming Technologies and Tools
- and for elective courses:
 - COMP 2396 Object-oriented Programming and Java
- so that you can participate in a development team and contribute as a ***competent*** programmer.

Programming Skills

- Broadly speaking, 4 areas:
 - Design
 - absolutely essential
 - Coding
 - needs “good” style
 - Testing
 - be prudent
 - Debugging
 - logical thinking

Practice, practice, and lots of practices !!!