Exam Coverage

Let's have a preview of what will be included in the exam

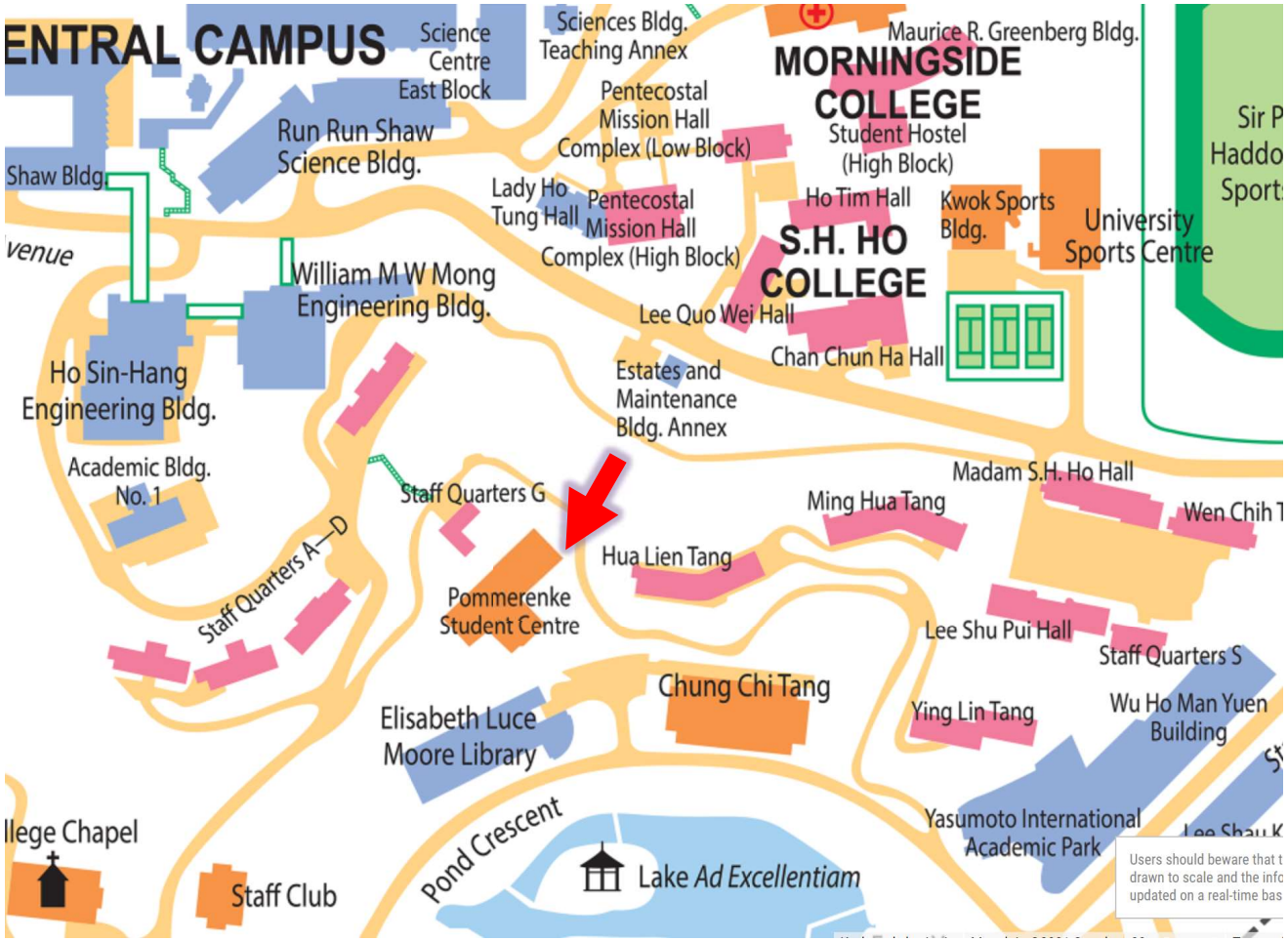
Final Examination details

- **Date**: Dec 9, Friday

- **Time**: 1530 to 1730
  - Arrive at least 15 min. earlier.
  - RGS will refuse to let you have the exam if you are late for more than 30 minutes.

- **Venue**: Multi-purpose Hall, Pommerenke Stud. Centre
  - Between CC Library and CC Canteen
  - You should go there at least once before the exam in case you don't know where it is.

Map & direction



http://www.res.cuhk.edu.hk/images/content/examinations/Location/Exam-Centres-photo-PSC_MPH.pdf

Final Examination details

- **Close-book / Close-notes Examination**
  - Just like public exams
  - No calculators
  - Stationery: pens, pencils, eraser (high-quality), correction pen
- **Bring Student ID Card**
  - If you forget, the RGS staff may give you a hard time...
  - You need to go back to RGS to formally claim your identity after the exam
- **Bring a jacket**
  - I never correctly predict the temperature inside the hall...

Want to see the final exam paper? Let's have a preview!!!

Exam Paper… Ready?

香 港 中 文 大 學
The Chinese University of Hong Kong

Course Examination 1st Term, 2022 – 2023

Course Code & Title : ESTR1002 Problem Solving by Programming

Time allowed : 2 hours Section :

Student I.D. No. : Seat No. :

請勿攜去
Not to be taken away

<< The Cover Page >>

Please read the following instructions carefully.

- You are required to answer **ALL** questions. Full Score is 100. **Time allowed is 2 hours**.
- Please write all your answers in **the space provided** on this question paper.
- **If there is not enough space, you may write answers on over-leaf.**
- The last page is a draft sheet.
- Please write neatly using pen or pencil.

Exam Paper… last page!

<< Appendix >>

Partial List of C Operators in Decreasing Precedence	Associativity
() [] . -> ++ (postfix) -- (postfix)	left-to-right
+ (unary) - (unary) ++ (prefix) -- (prefix) ! * (unary)	right-to-left
* / %	left-to-right
+ (addition) - (subtraction)	left-to-right
< <= > >=	left-to-right
== !=	left-to-right
&	left-to-right
&&	left-to-right
||	left-to-right
= += -= *= /= etc.	right-to-left
, (comma operator)	left-to-right

ASCII Table							
0 NUL	1 SOH	2 STX	3 ETX	4 EOT	5 ENQ	6 ACK	7 BEL
8 BS	9 HT	10 NL	11 VT	12 NP	13 CR	14 SO	15 SI

Exam Paper Style

- Common Examination with ENGG1110

  Some of the questions are shared with ENGG1110

  The rest are for ESTR1002 only

- ~30 marks are code-tracing questions

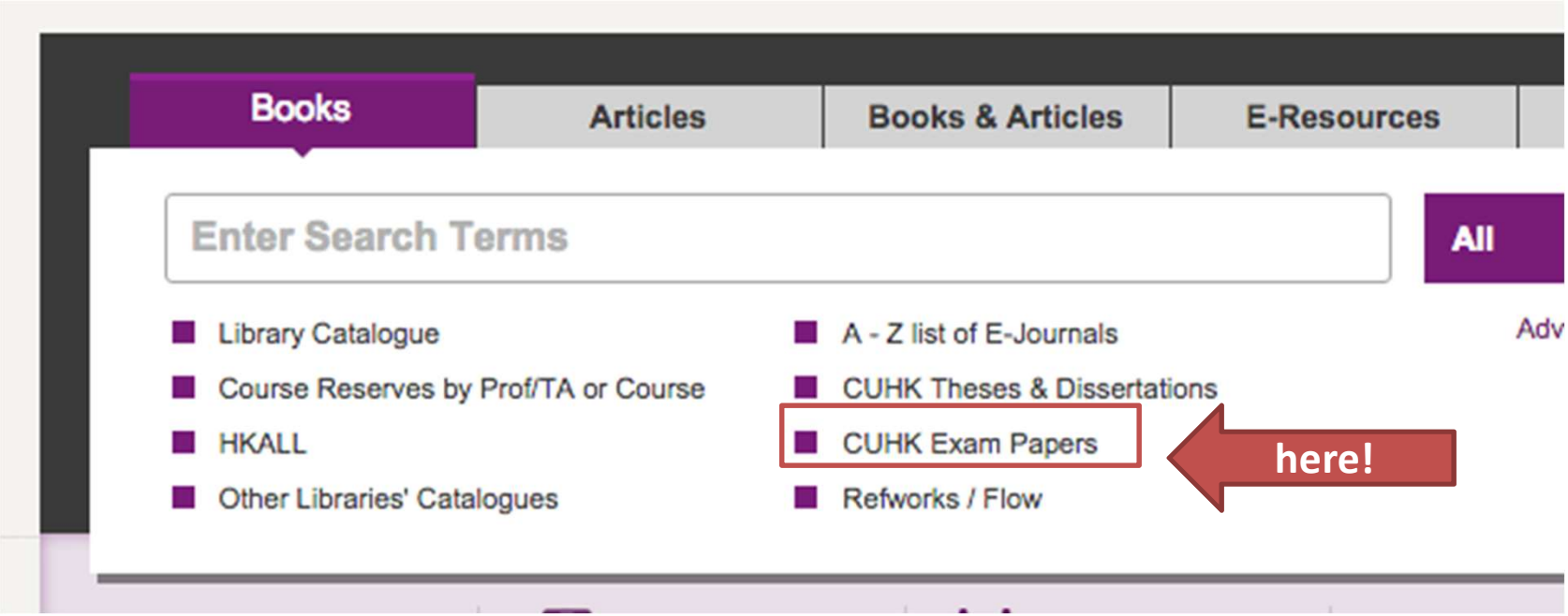
- ~70 marks are code-writing questions

Preparation

- Make sure you understand the lecture material
  - Concepts in Lecture notes
  - Examples in Lecture notes
- Check out our lab exercises
- Check out the take-home exercises
- Pointer, structures, and file IO
  - No related “lab” exercises, but still included!!!
- Sample questions NOW on course webpage!!!

Preparation

- To download past paper of ENGG1110 / ESTR1002:
  - http://www.lib.cuhk.edu.hk/
  - Term 1: Class A – F and Term 2: Class I – N



How to study?

- Level 1: Understand the Concepts
- Level 2: Understand the Example Code in Lecture Notes
  - Be able to read code and understand how it works…
- Level 3: Try the Questions in Past Exam Papers
  - Not only read code, but also write code
  - You may form small groups to work together and share
- Level 4: Dry Run! Testing!
  - Test slowly and carefully
  - And always double check your answers

Some Suggestions

- Sample exam paper
- Bring Sharp Pencils -> Make sure you write clearly
- Bring High-quality Eraser(s)
- Calculator? No need at all
- No need to be too environmental friendly -> in your answers
  - Write alternative lines
  - More space in-between, so you may add missing stuff later
- You may sketch a bit first; think about the major steps…
- Time Management: Total 100 marks over 2 hours
- Always double check your answers

Exam Coverage

- **Included:**
  - **`printf()`**, **`scanf()`**, and the format strings
  - Data types and arithmetic
  - Flow of control (if-then-else + loop)
  - Variable scoping + Functions + Recursions
  - Character & String Processing
    - strlen()
    - strcmp()
    - strcpy()

    ……

Exam Coverage

- **Included (continued):**
  - Random
  - Algorithms
    - Sorting, searching, permutation & recursion!!!
    - We will test on the algorithms you learned in the course!
  - Pointers, Structure, etc.
  - Very short question(s) on the ICAC talk

Exam Coverage

- **<u>Excluded: PDF files on blackboard lecture page:</u>**
  - 00. Course Outline and Syllabus.pdf
  - 00. UsingCodeBlocks.pdf
  - 09c. File_and_project.pdf
  - 10a. Multi-file-compilation.pdf
  - 10b. Computer Player.pdf
  - 13a. Exam.pdf

~~ END OF ESTR 1002 ~~

~~ Hope you enjoyed the course ~~

You all have the respect from the teaching team!

Thank you!

After exam…

Wishing you all **peace**, **joy** and **happiness**

Enjoy "Christmas"

- What else for C/C++ programming
  - More on C:
    - Things that we didn't cover much, e.g., pass data to main() by argc & argv, system() in C, time.h in C, variable arguments, debugger, error and exception, gcc compiler, dynamic linked library (DLL), etc.
  - C++:
    - class and object, constructor and destructor, class variables and class methods, new & delete, reference variables, this pointer, virtual, inheritance, polymorphism, namespace, overloading, etc.
  - STL: standard template library (SUPER SUPER USEFUL)
    - Sequence containers: vector, list, queue, iterator, etc.
    - Function pointer, Functors, STL algorithm, etc.
- Other things: version control, GitHub, Python, etc.