

# CMPT 126

Introduction to Computing Science and Programming

Instructor: Dr. Aaron Hunter

Section: E300

Campus: Harbour Centre

Semester: Fall 2006

# What Are We Doing Here?

“Solving problems is a practical art, like swimming, or skiing, or playing the piano: you can learn it only by imitation and practice.... if you wish to learn swimming you have to go in the water, and if you wish to become a problem solver you have to solve problems.”

-George Polya

# The Course

- Introduction to **Computing Science and Programming**
  - This title is not redundant!
- Fundamental issues in problem solving
- Programming techniques in Java
- But you already know some programming....  
right?

# 120 vs. 125 vs. 126

- If don't know how to program, then you should take 120 followed by 125
- If you already have some programming experience, then you are in the right place
- If you don't already have some experience, you are probably in the wrong place
- There is a self evaluation linked from the website

# Topics

- Java basics
- Recursion and fundamental algorithms
- Objects
- Inheritance and polymorphism
- Exceptions and file I/O
- Whatever else we have time for... e.g. regular expressions, dynamic data structures

# Evaluation

- Labs: 10%
- Assignments: 20%
- Midterm: 20% (October 26)
- Final: 50% (December 11)

# Labs

- Starting in week 2
- Wednesdays 18:30 in room 7050
- Basic programming tasks, posted by Monday
- Due by the end of lab time
- Marked by TA, out of 4
  - Participation/attendance
  - Understanding
  - Finished work

# Assignments

- Four assignments
- Tentative due dates on course web site
- Larger, problem-solving type tasks
  - All work is individual
- Due at midnight on due date



# Exams

- Midterm
  - October 26, in lecture time
- Final
  - December 11, as scheduled by registrar
- No computers, calculators, etc...
- Covers all material discussed in class, and all assigned readings

# References

- Java Software Solutions, Lewis & Loftus
  - 5th edition (4th is very similar)
  - Available at the bookstore
  - Also on reserve at the library
- Online references at course web site
- These notes will be posted following lectures
  - The lecture notes do not contain everything I *say* in class

# The Course Web Site

- <http://www.cs.sfu.ca/CC/126/amhunter>
- All labs, assignments, notes, examples, policies, etc. posted there
- Material generally to be posted, following the corresponding lecture

# Assigned Readings

- These are also posted on the web site
- Please read assigned readings *before* the lecture date
- The reading may be a bit top-heavy
  - Early on, lots of reading
  - Later on, more problem solving
- Most readings are from the textbook
- We will not cover the material in order

# Harbour Centre

- This is the first CMPT offering at HC
- Why this is good
  - Small class
  - TA support
- Why this may be a challenge
  - Practical questions: lab hours, media support, printing

# Brief Summary of First Reading

- Hardware and software
- Binary numbers
  - $11001 = (1 \times 2^4) + (1 \times 2^3) + (0 \times 2^2) + (0 \times 2^1) + (1 \times 2^0) = 25$
  - Appendix B in text
- The Internet
- Editors, compilers, interpreters

# Anything Else?

- Questions?
- More topics?
- Suggestions?