

COMP 1006/1406A

Introduction to Computer Science II
Summer 2016

M. Jason Hinek
Carleton University

COMP1006/1406: Intro to Computer Science II

what? A second course in programming emphasizing problem solving and computational thinking in an object-oriented language. Topics include abstraction, mutable data structures, methods, inheritance, polymorphism, recursion, program efficiency, testing and debugging.

when/where? Lectures:
6:05pm - 8:55pm Monday and Wednesday
University Centre (UC) 231

Tutorials:
T01: 6:05pm - 8:55pm Tuesday
T02: 6:05pm - 8:55pm Thursday
Herzberg Building (HP) 4155

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who? Instructor:

M. Jason Hinek

- ▶ Herzberg Building (HP) 5332

TAs:

William, Jack and Connor

- ▶ Tutorials, office hours, marking

Rui and Atamjeet

- ▶ Office hours, marking

You:

have taken COMP1405/1005, SYSC1005, or ECOR1606

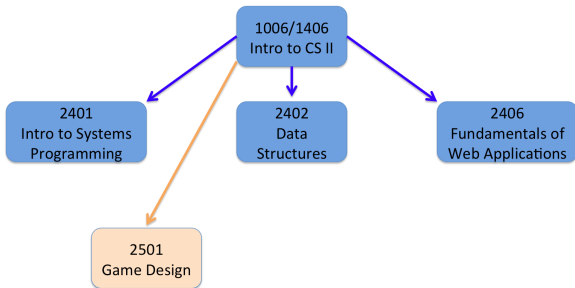
why?

why?



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why?



why?



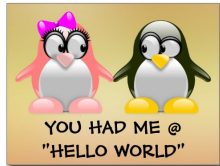
why?

Canada needs 182,000 people to fill positions for information systems analysts and consultants, computer and network operators, Web technicians, software engineers and others in by 2019,...

IT World Canada, 2015

<http://www.itworldcanada.com/article/canada-needs-182000-people-to-fill-these-it-positions-by-2019/287535>

why?



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how?



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- Topics ▶ Abstraction
 - Mutable data structures
 - Methods (functions)
 - Object Oriented Programming (OOP)
 - Inheritance
 - Polymorphism
 - Recursion (recursive functions and recursive data types)
 - Program efficiency
 - Testing
 - Debugging
 - Java (will be used throughout)

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Prerequisites ▶ One of COMP1405/1005, ECOR1606, or SYSC1005.

Note ▶ You must receive at least a **C-** in COMP1006/1406 in order to proceed to either COMP2401, COMP2402, or COMP2406.

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Evaluation ► Your final grade will be made up from six components:

A	Assignments	25%	[0-25]
T	Tutorials	10%	[0-10]
Q	Quizzes	5%	[0-5]
P	Project	10%	[0-10]
M	Midterm Exam	15%	[0-15]
F	Final Exam	35%	[0-35]

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You must pass the weighted average of your midterm and final exam in order to pass the course. Your final grade will be determined using the following:

```
if (M+F >= 25) then
    final grade is min( A+T+Q+P+M+F, 100)

otherwise
    final grade is min( 2*(M+F), A+T+Q+P+M+F )
```

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Project ▶ You will work in teams of 2-4 people.

You will present your project (demonstrate your program and answer questions) in the last week of classes (Monday's class or Tuesday's tutorial).

It will be possible to earn bonus marks for doing extra work.

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Quizzes ▶ There will be six pop quizzes throughout the term. One in each week of classes.

Each quiz is worth one mark and the best 5/6 quiz marks will be used for your overall quiz grade.

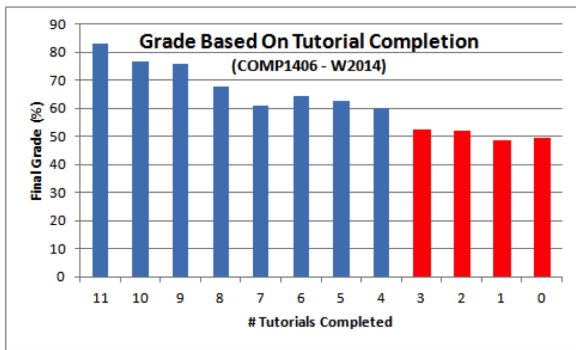
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Tutorials ▶ There are five tutorials.

In tutorials you will work in groups of two (pair programming) and your grade will be based on attendance and progress on tutorial material.

For a given tutorial, you will not receive full marks if you are not present for most of the tutorial, if you are not working on the tutorial material, or if your team does not make sufficient progress.

There are no tutorials the week of the midterm.
Tuesday's tutorial will be open office hours for anyone.
Thursday's tutorial will be open office hours for anyone.

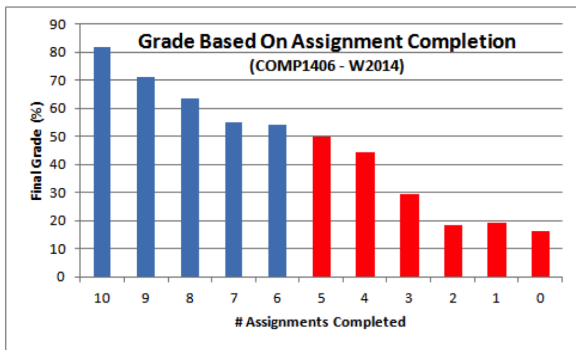


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Assignments ▶ There will be 5 assignments in this course.

All assignments are due at the **5:30pm** on the dates given below. **No lates will be accepted.**

Assignment	Grade	Available	Due
Assignment 1	5%	available July 4	due Monday, July 11
Assignment 2	5%	available tba	due Monday, July 18
Assignment 3	5%	available tba	due Monday, July 25
Midterm	15%		Wednesday, July 27
Assignment 4	5%	available tba	due Tuesday, August 2
Assignment 5	5%	available tba	due Monday, August 8
Project	10%	available tba	presented August 15 or 16



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- Appeals ▶ If you have an issue with the marking of an assignment
- ▶ complete the grading rubric for the assignment
 - ▶ send the rubric and your written appeal to the TA that marked your assignment within ONE week from the return date
 - ▶ if it is a correctness issue, your appeal should refer to your submitted test cases

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If you have an issue with the marking of the midterm

- ▶ Submit your written appeal along with your midterm to me
- ▶ You must submit this no later than 2 weeks after midterm is returned to class. Appeals will not be accepted after this.

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Communication

- cuLearn** ▶ Any questions about the course material, assignments, tutorials, etc. should be sent to the course discussion group on cuLearn.
- email** ▶ Only personal and private matters should be sent by email.

All email should have its subject line starting with [\[comp1006\]](#) or [\[comp1406\]](#), followed by some short description.

You should identify yourself (with name and ID number).

You will receive a reply within 48 hours. (If not, please resend the email.)

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Collaboration ▶ Use good judgement

It is OK to:

- ▶ Discuss possible approaches to and interpretations of an exercise.
- ▶ Help debug another student's program.
- ▶ Post questions on the class forums. (**I strongly encourage this!**)
- ▶ Answer questions on the forums. (**without posting solutions**)

It is NOT OK to:

- ▶ Share working code or code fragments.
- ▶ Write code in groups and then share the finished code.
- ▶ Post questions on forums besides ours on culearn.
- ▶ Post complete or partial assignment solutions on cuLearn before the due date.
- ▶ Take credit for someone else's work

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Plagiarism ▶ We will be looking for this in your submissions

- ▶ If you copy code from any source (another student, your sibling, the internet, a book, etc.) other than yourself it is plagiarism.
- ▶ if you copy code from any source other than yourself and change variable names it is still plagiarism.
- ▶ if you copy code from any source other than yourself and add or remove blank lines it is still plagiarism.
- ▶ if you copy code from any source other than yourself and you do not give proper credit (citation) is plagiarism.
(Sometimes, starter code is permitted in assignments; these must be cited properly.)

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We may be sending your submitted code to a plagiarism detection server to check for plagiarism.

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Java ▶ Install the latest version of Java SE8

DrJava ▶ The only IDE supported by COMP1006/1406

Editor/Shell ▶ notepad++ and cmd (windows)
something and terminal (os x)



Note: You are free to use whatever IDE (or environment) you wish.
However, you must submit plaintext `.java` files (**no packages**).

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Expectations

background ▶ You have taken COMP1005/1405 (or equivalent)

You know about pseudocode, variables, conditionals, iteration, arrays, objects, functions, sorting, searching, and simulation. (We will not spend much time on these.)

workload ▶ This is a condensed course.

Every week is like TWO weeks during the Fall or Winter semesters. The workload will be comparable to a regular term.

20 hours per week is expected (6 hours of class, 2 hours of tutorial, 12 hours of reading, coding, etc).

Participation ▶ Use the forum, go to office hours, work together



School
Policies

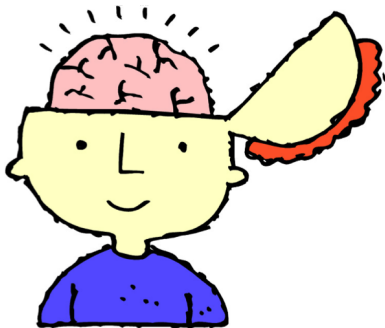
electronics

talking

other



A bit about your brain...

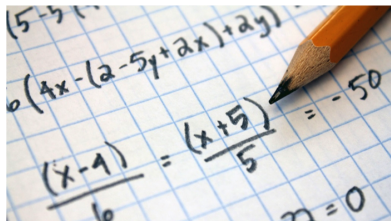


[http://podcasts.shelbyed.k12.al.us/sspears/files/2015/01/
Understanding_How_the_Brain_Naturally_Learns-1.pdf](http://podcasts.shelbyed.k12.al.us/sspears/files/2015/01/Understanding_How_the_Brain_Naturally_Learns-1.pdf)

A bit about your brain...

Practice makes permanent!

A bit about your brain...



<http://www.scientificamerican.com/article/reading-paper-screens/>

Let's get going!