Course Description

CS101 is an introduction to computing and digital multimedia. The main ideas of computing are explored: algorithmic thinking, encoding information, using protocols and standardization, and abstraction. CS101 will discuss the practical application of these ideas by addressing questions including:

• Why are your grandparents (or parents) so amazed about the computing stuff we take for granted?
• Why is it that you can go to the App Store and get new programs to run on your iPad?
• What is the World Wide Web? Where did it come from? How do you write a web page?
• What is the Internet? What does the Internet do? How does it work? What are its vulnerabilities?
• What's the difference between 4G and WiFi? What is WiFi, anyway? Where did WiFi come from?
• What happens to your text message to get it to your friend’s phone?
• How is music recorded on a computer? How it is possible to store thousands of songs on a tiny iPod?
• How does your mobile phone take a picture or record a video?
• How does that picture get transmitted to Facebook, or displayed on your friend’s computer?
• How does Google know which web pages to suggest to you?
• How does Amazon secure your credit card information during an online purchase?
• How does an animated movie get made? And how does this teach us about computer science, anyway?

To answer these questions, CS101 will survey a selection of fundamental topics in computer science. The applied portion of the course will cover designing and publishing basic web sites, image and audio manipulation and 3-D animation.
Books
The following books are recommended. We will use custom-published versions of 2 books:


*Digital Media Primer*, by Yue-Ling Wong

We will also use the full version of this book:

*Alice in Action*, by Joel Adams.

Other online readings and tutorials will be posted to the schedule page.

Software
We will use the following software programs for practical assignments:

- Notepad++ (Windows) or TextWrangler (Mac) to edit Hyper Text Markup Language files
- WinSCP (Windows) or Fetch (Mac) to transfer files to the Webserver
- Audacity for audio recording and manipulation
- Gimp for image manipulation
- Alice 2.x for programming/animation

All of these software programs are available in the undergraduate CS lab (EMA304), and are available for free (except Photoshop). If you have your own laptop computer, please install the software and bring your computer to class to participate with examples.

Grading
The following percentages are tentative and may be changed at my discretion at any time:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Homework Assignments (about 12)</td>
<td>35%</td>
</tr>
<tr>
<td>Written Quizzes (6) and the Final Exam*</td>
<td>50%</td>
</tr>
<tr>
<td>Final Game Project</td>
<td>10%</td>
</tr>
<tr>
<td>Lab attendance and submission**</td>
<td>5%</td>
</tr>
<tr>
<td>Attendance: I will award up to 1 bonus points for perfect or near perfect attendance</td>
<td>1% BONUS</td>
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</tbody>
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* The written final exam is optional. You may elect to use the average of your in-class quizzes in place of writing the final exam.

** For labs, points will be awarded for attendance as well as submitting your work done during the lab.

Withdrawing from the Course
If you feel that you want to drop or withdraw from the class, please come talk to me about it as early as possible; I want to help you succeed, but you need to ask for help.
The last day to drop a class (without a “W” grade) is Thursday, February 20, 2014.
The last date to withdraw and receive a “W” grade is Friday, March 28, 2014.
**Getting Help With Homework**

The homework assignments in this class will be very challenging and often time consuming. **Work on homework assignments as soon as they are given.** Plan your time so you can so you can ask questions in class and get assistance in the labs and tutoring hours.

If you get stuck, the teaching fellows are here to help you. The best avenue for getting help is to email your TF, or to come to office hours. Emails will be answered within 24 hours, often sooner, during the weekdays, and by Monday at noon if your email comes in over the weekend.

Please come talk to me immediately if you feel like you are falling behind. I want to help you succeed, but you need to ask for help.

**How to Prepare for Quizzes and the Final Exam**

**The most effective strategy is active recall.** Reading the book, notes and examples alone will give you a false sense of familiarity. Instead, you must actively digest the class material, and practice your recall of it in question and answer form.

After each class meeting, review the class notes and examples, and especially points that I spend time elaborating upon. For each of these “main points” – there are probably about 4-6 of these per class meeting – you should write out a challenging question about the point, and prepare the answer.

By actively preparing questions that you know you can answer, you will be surprised how many of those show up on the quiz/exam.

**Quiz Rewrite Policy**

My goal is to help you do your best work, and for you be graded on your best work. If you are not satisfied with your quiz grade, you have the option to count your final exam score in its place. I recommend this option for anyone who receives a grade less than 60 on a particular quiz, but the option is available to anyone who wants to do the re-write work.

- To earn this option, you must re-write the quiz as a take-home assignment and email your answers to me.
- Please use the title "QUIZ REWRITE FOR LASTNAME, FIRSTNAME" in your email.
- Quiz rewrites are due by the Friday after the quiz was returned in class.

**Frequently Asked Questions**

Q. Am I limited to only rewriting one quiz this semester?
A. No you may rewrite as many quizzes are you choose.

Q. Does a quiz re-write mean the final exam is required?
A. Writing the final exam is required to replace your quiz grade with your exam grade. You can still choose not to take the final exam, and keep your original quiz grade(s).

**Example**

Suppose you received a 35 on quiz 2. I recommend that you rewrite this quiz as a take-home quiz. I will return your email with brief feedback. Suppose that you write the final exam and receive a grade of 80. The final exam score of 80 will count for the final exam grade, and also replace the quiz 2 grade of 35. However, at the end of the semester you may still choose to not take the final exam, in which case your quiz 2 grade would remain 35.
Assignment Grade Review Policy
Programming assignments will be submitted via Blackboard. In general, assignments will be graded within 5 days of submission. The grader will follow a standardized rubric and include comments about any point deductions.

Please do not bring up grade questions during class or tutoring hours, as this would take time away from helping you and other students with programming assignments. Instead, if you have questions or concerns about a grade on an assignment, you should email the Teaching Fellow to request a review. The TF will process grade reviews within 3-4 days and respond by email.

Requests for grade reviews must be submitted by email within 2 weeks after the assignment was graded. Requests for grade reviews submitted more than 2 weeks after an assignment is graded will not be processed. Do not wait until the end of semester, as this is a very busy time for everyone.

Administrative Policies
The official administrative business of this class will be conducted by email.
Grade questions/disputes, notification of absence, etc. will be processed via email so that we both have a written record of what was agreed.

Attendance and discussion/asking questions are expected and will be reflected in your grade.
If you must be absent, please email me in advance to let me know why you won’t be in class, and to let me know what you will do to keep up with the assignments.
CS101 is not a correspondence course. Inadequate attendance is sufficient grounds for a grade of F.

Lab attendance and submission of the lab work is required.
Lab work is not “graded” like a homework assignment, but rather it is checked for submission time/location for attendance purposes and for completion.
Late lab work will be accepted within 3 days, but only for completion credit (not attendance).

Assignments are due on the date stated on the homework assignment (to be posted on web).
• Assignments received within 0-24 hours of the deadline will be accepted with a 10% penalty.
• Assignments received within 24-48 hours of the deadline will be accepted with a 20% penalty.
• Assignments received more than 48 hours past the deadline will not be graded.

There will be no make-up quizzes or exams.
If you have to miss a quiz for a medical reason or other extreme circumstances, you must inform me in advance. You will have the opportunity to write the quiz as an ungraded take-home assignment and then count your final exam score in its place.

No special make-up work will be accepted after the end of the semester. Don’t even ask.
In the event of a documented major medical problem, a grade of Incomplete will be given pending the submission of complete work. However, make up work “to improve one’s grade” will not be accepted.

It is the student’s responsibility to retain all papers, quizzes, and exams that have been graded and returned. Should these original documents not be available in the event of a grade dispute, I will need to defer to my own records.

Requests for review or re-grading of quizzes or homeworks should be brought to your TF or instructor by email (preferred) or in office hours, no later than 2 weeks after the quiz/homework has been returned, and absolutely no later than the last class day of the semester.
Grades are not negotiable. Don’t even ask – just do the work and you’ll get the grade you deserve. Of course, please bring any clerical grading errors to my attention by email and I will gladly fix them.

Plagiarism, Collaboration, and Collusion
All CS101 homework assignments are independent work.

It is the student’s responsibility to know and understand the provisions of the CAS Academic Conduct Code, copies of which are available in room CAS 105.

In addition to the definition of plagiarism in the CAS Academic Conduct Code, with respect to CS101, plagiarism is specifically defined to include (but is not limited to) the following:

- collaboration on the solutions/code you write
- copying any part of someone else's assignment/program, even if you have permission and/or have modified the code
- sharing or giving your assignment/code or even a subset of your assignment/code to another student to review
- reviewing another student’s solution (including from past semesters)

It is my policy to use automatic plagiarism detection software, and suspicious similarities will be uncovered. I am required by Boston University and the College of Arts and Sciences to refer cases of academic misconduct to the Dean’s Office. The University takes acts of cheating and plagiarism very seriously; first time violators are routinely suspended for a semester.

What is acceptable cooperation?
Cooperation is recommended in understanding programming concepts and system features. You are encouraged to discuss the labs, the homework problem statements and expected output, and to seek and receive help with HTML, Photoshop, Alice, any other software tools we use.

However, each student must write his or her own solution/code and other deliverables independently.