PIC 10A SECTION 1, MAR-JUN, 2016

INSTRUCTOR:	Michael Lindstrom (Mike)
OFFICE HOUR (MS 5622):	M 15:00-15:50, T 13:00-13:50, R 11:00-11:50, F 15:00-15:50
CONTACT INFO:	*e*: M I K E L [at] math [dot] ucla [dot] edu, *p*: 310-825-3049

LECTURE TIME/LOCATION:	M/W/F 8:00-8:50 in WGYOUNG CS 76
SECTION WEBSITE:	www.math.ucla.edu/~mikel/teaching/pic10a
	- Includes homeworks, weekly lecture notes, general info, etc.
CCLE:	https://ccle.ucla.edu/
	- For homework submission, class discussion forums
UPDATES:	Check your email! Also see section site and/or Twitter: @pic10a_ucla

TEXTBOOK:	Big C++, Horstmann & Budd, 2nd Edition
PREREQUISITES:	None – but hopefully an interest in programming and science!

TUTORIALS:	T/R 8:00-8:50 (A–MS 5148 & C-MS 6201)
	or 9:00-9:50 (B-MS 6201 & D-MS 5118)
TAS:	Will Oakley, *e:* W G O A K L E Y [at] ucla [dot] edu
	Qi Guo, *e:* Q I G U O [at] ucla [dot] edu
	Eric Kim, *e:* E R I C K I M 5 5 5 [at] gmail [dot] com
	Melissa Lynn, *e:* M K L Y N N [at] ucla [dot] edu

TA OFFICE HOURS:	Will (PIC Lab MS 2000) M 10:30-12:00
	Qi (MS 3905) T 14:00-15:30
	Melissa (PIC Lab MS 2000) T 10:30-12:00
	Eric (PIC Lab MS 2000) R 14:00-15:30

SUPPORT: You are highly encouraged to form study groups, share notes, collaborate, etc. And don't forget about CCLE discussion forums and office hours!

The purpose of office hours and CCLE discussions are primarily to discuss/clarify course concepts and for homework-related hints on how to approach a problem.

GRADING SCHEME:
Grading is performance based and not based on a curve. In particular, there is no limit to the number of A's that can be assigned! Regardless of your programming background, if you demonstrate mastery of the material, you can get an A!

Grades are computed first as a percentage and then mapped to letter grades. If your grade as a percentage is X then your actual final grade will be at least as good~ as yielded by the following mappings:

$98 < X \leq 100$ → **A+**	$95 < X \leq 98$ → **A**	$92 < X \leq 95$ → **A-**	
$89 < X \leq 92$ → **B+**	$86 < X \leq 89$ → **B**	$83 < X \leq 86$ → **B-**	
$80 < X \leq 83$ → **C+**	$77 < X \leq 80$ → **C**	$74 < X \leq 77$ → **C-**	
$71 < X \leq 74$ → **D+**	$68 < X \leq 71$ → **D**	$65 < X \leq 68$ → **D-**	$0 \leq X \leq 65$ → **F**

~UCLA describes letter grades and their interpretation in the following ways: A is "superior"; B is "good"; C is "fair"; and D is "poor." The precise cutoffs will be determined at the end of the term but they will be no higher than prescribed above. For example, with a percentage of 92.01%, you are guaranteed an A- or better no matter what, but it's possible that in the end an 86.80% would earn an A-, just as a hypothetical example.

Your percentage is computed based on the best of three schemes. Scheme I is more participatory; scheme II is very test-heavy; and scheme III is for "emergency" situations only. Scheme I is highly recommended.

I: Class Participation – 20%   **II:** Class Participation – 0%   **III#:** Class Participation – 0%
    Homework* – 35%   Homework* – 35%   Homework – 0%
    Mini-midterms** – 10%   Mini-midterms** – 10%   Mini-midterms – 0%
    Final Exam – 35%   Final Exam – 55%   Final Exam (Minus 10%) - 100%

* two lowest scores dropped (out of 6 homeworks)
** two lowest scores dropped (out of 4 mini-midterms)
\# only applies if homework score or participation score exceed 50%

Class Participation: Using any internet-enabled device you have, you will submit responses to problems that will be asked during class via a simple web form at www.math.ucla.edu/~mikel/teaching/pic10a/php/InputPage.html

If having access to such a device is a problem, consider allowing a neighbour with internet access to submit your answer.

Scoring: you earn 4 points for any response and 1 extra point for correctness. Full marks are earned for earning 72% of all points, i.e., if you respond to every single question given but you are somehow wrong on all of them (unlikely!) then you will still earn 80/72 → 100% here. On the other hand, if you score less than 72% of all points, your mark here will be the fraction of 72% of points you earned so earning 36% of all points (fraction 0.5 of 72) would amount to 50% for a participation mark. This is really about participation and thinking in-class, and not a serious form of assessment!

Mini-midterms: You will be given a total of four mini-midterms, each lasting 20 minutes. These tests will primarily focus on material since the previous test.

Homework: There will be 6 homework assignments to submit on CCLE. The assignments will be posted on the course webpage. Most of your learning will take place in doing the assignments!

Visual Studio 2013 is available for download here as Visual Studio 2013 Express (https://www.microsoft.com/en-us/download/details.aspx?id=44914) and provided in the PIC Lab.

Visual Studio 2013 is the course standard for homework submissions and all course work: this course does not support Mac Xcode or other compilation environments. Homeworks will be graded according to Visual Studio 2013 alone. If your code does not compile or operate correctly on Visual Studio 2013, marks will be deducted as though it does not compile or operate correctly, regardless of whether it works on other software!

Homeworks will be scored out of <u>12 points</u> as below:
Code readability (3 points): code documentation/commenting, choice of variable names, and layout
- 0 ← unreadable and confusing
- 1 ← either difficult to read or confusing, with the exclusive or implied
- 2 ← reasonable
- 3 ← exceptional

Good coding practice (3 points): not only should the code compile and run, but as various "good practices" are introduced in the course, you should adhere to them such as using size_t for indexing containers, adhering to const correctness, including return 0 in main(), choosing unsigned variable types when appropriate, etc.
- 0 ← more than two errors
- 1 ← two errors
- 2 ← one error
- 3 ← no errors

Output (6 points): the code should perfectly match the description given in the homework.
- 0 ← does not compile or the output is far from the desired output
- 2 ← the code compiles and the output loosely resembles the desired output
- 4 ← the output is slightly off the desired output, but very close
- 6 ← the output is a perfect match to the desired output.
Scores of <u>1, 3, or 5 are not possible</u> in this category.

Final Examination: There will be a final exam covering all the material from the course on <u>Thursday, June 9, at 3:00 pm</u>. The policies are TBD.

FORMAL POLICIES:

Missing Work: If the <u>final exam</u> is <u>missed</u> for a <u>valid reason</u>, you will be given an <u>oral final exam</u>. University policy states that <u>you cannot pass</u> the course <u>unless you take the final exam</u>.

<u>Valid reasons</u> include one of the following: (a) prior notice of a valid, <u>documented absence</u> (e.g. out-of-town varsity athletic commitment), (b) notification to the instructor <u>within one week</u> due to a <u>medical condition</u> or (c) an <u>emergency</u>. <u>All reasons require written documentation</u>, for example a <u>doctor's or counselor's note stating</u> the student was <u>medically/psychologically unfit</u> to be in school, a copy of a <u>death certificate</u>, or a <u>letter from a coach</u>. A <u>score of zero</u> will otherwise be assigned.

Because the two lowest quizzes and two lowest homeworks are dropped, <u>none of these grades will be excused no matter what,</u> even for a valid, documented absence. Every score will count, but the dropped scores might be zeros.

Collaboration Policy: You must identify all collaborators on your assignments and you <u>must do your own work and typing</u>!

Students with Disabilities: If you have a <u>documented disability</u>, please <u>contact the Office of Student Disabilities and have them consult with your instructor</u> to ensure you are accommodated. It is <u>your</u>

responsibility to do this in a timely manner. Special exam accommodations will not be provided by the instructor or TAs.

Regrading: All tests will be returned at the discussion sections. You will then have until the end of that discussion section to request a regrading. To request a regrading:

  (i) you must write a note on a separate piece of paper from your exam, outlining why you are requesting a regrading;
  (ii) you may not write anything extra on your exam;
  (iii) and you must submit your regrading request to your TA by the end of the discussion section in which the test is returned. Once you leave the discussion room with your exam, the grade is final.

Work will not be regraded if items (i)-(iii) are not all satisfied. If you miss the discussion section, you must collect your test from the instructor's office hours within 5 business days of the original return date and then the same policies apply: once you leave the office with your test, the grade is final.

With a regrading, your work in its entirety will be regraded by the instructor, not just the single question(s) you are asking about: your mark could stay the same, go up, or (in rare cases) go down.

If you catch an addition error, you still must return your work according to the policies listed above, but none of your test will be regraded – the total will simply be checked and corrected if necessary.

To request a homework regrading, you must submit a handwritten request to the instructor in person within 5 business days of the homework grade release date. In requesting a regrading, your mark could stay the same, go up, or (in rare cases) go down.

Cheating: If a student is suspected of cheating (on a test, assignment, etc.), the department will be notified immediately and severe academic disciplinary action may follow. This could include expulsion from the university!

Examples of cheating include: starting a test before the designated time, continuing to write when time is up, intentionally looking at another student's exam and copying, intentionally exposing your own exam to a student, copying another student's homework code verbatim (even if you just change the variable names/comments, that's plagiaising!), adjusting your answers to an exam after it has been graded and requesting a regrade, or not attending class and getting a classmate to respond to the participation problems on your behalf.

Homeworks will be screened with a plagiarism detection software called JPlag.

A random selection of tests will be photocopied before being returned.

Emails and Course Forums: Homework-specific or conceptual questions should be posted on the online discussions at CCLE instead of an individual email to the instructor or TAs.

It is best to speak in person about personal course concerns and to post on CCLE for other questions.

Emails about anything that is answered in the syllabus, in class, or in course announcements will not receive a reply.

Instructor Discretion: The final course marks <u>may</u> be <u>shifted and scaled,</u> and the instructor reserves the right to revise <u>any mark</u>. This syllabus is also subject to change.

GENERAL:

Discussion sections: The <u>discussions</u> are <u>extremely important</u>! The lectures serve to introduce topics, ideas, and build motivation; in the discussions, you will get vital practice and review.

Lateness and Talking: <u>If</u> you do arrive <u>late</u>, please <u>enter with your notebook/laptop, pen, etc. ready</u> and be as quiet as possible to avoid interrupting others. Conversations are best had outside of the classroom… <u>It's disruptive if you chat during a lecture</u>.

Electronic Devices and Distractions: Please <u>turn off</u> the <u>noise</u> on any cell phones, etc. If you may be tempted to use your laptop for non-class activities, be considerate of your classmates and sit towards the back to <u>avoid distracting others</u>.

Participation: You are encouraged to <u>get involved</u> in the material, to <u>answer questions</u> in class and on the forums, and to <u>ask questions</u> when you're unclear of what's going on. Don't be afraid to ask questions! To better engage with classroom discussion, <u>please try to sit next to at least one classmate</u> to discuss in-class problems.

Surveys: Throughout the term you will be given online surveys to fill out. They will be <u>anonymous</u> and will give you the opportunity to express how things are going in the course and to <u>address any concerns</u> you may have.

Review: There will be at least one review session prior to the final exam, possibly more.

Succeeding: There is no rule that anyone has to fail! <u>There is absolutely no reason you cannot excel in this course if you work for it!</u>

SUCCESS TIPS:

- <u>Attend class</u>. Hearing information live, doing problems, and being able to ask your own questions is important and correlates strongly with exam performance.
- <u>Pay attention to the Learning Objectives posted</u>: They essentially enumerate all the topics you could be tested on.
- <u>Do the non-graded practice problems listed in the Learning Objectives</u>: ideally, most of your study time should be spent doing problems rather than reading information.
- <u>Attend your discussion sections</u>. Lecture time is very limited: there is reason why there is almost an equal number of hours scheduled for this course outside of lectures.
- <u>Do not get behind</u>: like mathematics, once there is a topic you are weak with, it could very well prevent your understanding subsequent topics. The material does build.
- <u>Beware the "familiarity fallacy"</u>: just because you've seen a topic before, doesn't mean that you have mastered it.
- Make use of <u>office hours and discussion forums</u>.
- Don't be afraid to speak with your instructor: <u>you are not just a number</u>!