

PIC 40A SECTION 1, JAN-MAR, 2019

INSTRUCTOR:	Michael Lindstrom (Mike)
OFFICE HOURS:	Mon (shared with PIC 10B) 10:30-11:30 in PIC Lab Wed (PIC 10B priority) 10:30-11:30 in PIC Lab Fri (PIC 40A priority) 10:30-11:30 in MS 6221
CONTACT INFO:	e: M I K E L [at] math [dot] ucla [dot] edu, p: 310-825-3049 Office: MS 5622
LECTURE TIME/LOCATION:	M/W/F 8:00-8:50 in MS 2000 (PIC Lab)
SECTION WEBSITE:	www.math.ucla.edu/~mikel/teaching/pic40a
CCLE:	https://ccle.ucla.edu/ - for course notes and CCLE discussion forums
UPDATES:	Check your email and embedded twitter feed (@mikel_ucla_math)
OPTIONAL RESOURCES:	<i>Entirely optional:</i> Programming for the World Wide Web, 7 th Edition (R. Sebastia) Internet & World Wide Web: How to Program, 5 th edition (P&M Deitel)
PREREQUISITES:	PIC 10A (or CS 31) PIC 10B (or equivalent) is <u>strongly recommended</u> but not required~ <i>~ As listed on the UCLA Course Registrar site, PIC 10B is recommended! <u>Take this seriously!</u></i> <i>To be successful at this course, a certain level of <u>programming maturity</u> is <u>required</u>: if you do not have a strong programming foundation as evidenced, say, by earning an 'A' or better in PIC 10A and/or earning a 'B' or better in more advanced PIC classes, you may find this course overwhelming and it may not be suitable for you. There is a lot in this course!</i> <i>You will absolutely need good debugging strategies; attention to detail and syntax; fluency with control flow, functions, and objects; and knowledge of data structures and some algorithms.</i> <i>Ignore this warning at your own peril...</i>
TA:	Thomas Merkh
TUTORIALS:	T/R 8:00-8:50 in MS 2000 (PIC Lab)
CONTACT INFO:	e: T M E R K H [at] ucla [dot] edu
TA OFFICE HOURS:	Tues 13:00-14:50 in PIC Lab

COURSE FORMAT AND BACKGROUND:

The course is about programming for websites and will include aspects of markup languages, HTML5 and CSS3, to provide style; client- and server-side scripting languages for enhanced display, interactivity, and data processing with JavaScript and PHP; and data management, with databases, using SQLite. There will be emphasis on both practical and theoretical knowledge of the languages and constructs.

NOTES/LECTURE/DISCUSSION: Unless otherwise specified, you are responsible for everything covered in the notes in addition to any material that comes up in lectures or discussion that might not be in the notes.

The lectures will generally follow the notes but may include more demonstrations and include less emphasis on more trivial definitions, syntax, etc. The discussions are there to reinforce concepts, go more in-depth into examples, and provide homework guidance.

SUPPORT: You are highly encouraged to form study groups, share notes, collaborate, etc. But you must do your own work and typing. Code plagiarism will be taken very seriously.

The purpose of office hours is primarily to discuss/clarify course concepts and for homework-related hints on how to approach a problem. Office hours are not designed as a time for the homework to be done or debugged for you.

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 academic background, if you demonstrate mastery of the material, you can get an A!

Your course percentage is computed based on:

- *Final Project* – 25%
- *Final Exam* – 40%
- Unit Tests – 10% (2 tests, equally weighted)
- Homework* – 15%
- Participation - 10%

* out of 5 homework assignments given all quarter, the lowest score will be dropped: this applies to everyone.

Precise cutoffs for letter grades are to be determined after the final exam and project; however, the general meaning of an A level grade (A-, A, or A+) is: outstanding work; proficiency in all of the course material; solid commitment to the course has been exhibited. Perfection is not required, but students of this category demonstrate determination and strong study skills, even when faced with setbacks or hard exams/assignments. Such students tend to do every assignment, regardless of its apparent difficulty, whether or not they have already earned full homework marks, and fully participate in all aspects of the course. Students at the upper-end of this category have a deep understanding of even the most

challenging course topics, appear to have an intrinsic motivation to learn the material, and often think about the material at a deeper level than the course requires. These students are comfortable enough with the course content and have a sufficient enough mastery of topics that they can apply their skills to new problems on exams and demonstrate, through practical demonstration, a total assimilation of course material. Many students here ask a lot of questions and make use of office hours, discussion sections, and other support. All students who earn A-, A, or A+ grades demonstrate proficiency in the material, but an A or A+ is only given to students demonstrating mastery of the material on all levels.

In setting the final grades: you will be anonymized (names blocked out) and ranked based on your overall course percentage with various data such as overall course percentage, final exam/project grade, etc., visible. Grade brackets are chosen to group qualitatively similar collections of students and a drop in one or more grade brackets is chosen when there is justifiably a difference, based on the data, between two successive students such as, but not limited to, a large gap in overall percentages or a noticeable drop in project/exam performance, etc. Historical grade distributions are also considered in this process if any grade brackets are otherwise ambiguous. See figure.

It is very likely that an overall percentage below 50% will be an F. This does not imply that scoring above 50% will automatically yield a passing grade!

23	19	17	14	0	12	12	11	11	0	0
33	15	14	9	15	12	11	9	0	11	0
---	---	---	---	---	---	---	---	---	---	---
20	20	12	0	0	12	12	11	6	0	12
46	18	17	0	0	12	11	11	5	6	8
24	23	10	11	0	12	12	9	10	12	0

Overall course percentages are redacted (greyed regions). Row-by-row, the overall course percentages are arranged in decreasing order.

---'s indicate a grade bracket cutoff: note that any student above a cutoff had a higher overall course percentage (greyed) than the student below. Generally, the letter grade cutoffs are determined by (i) a large percentage gap in overall course percentage or final exam grade (first visible column), or (ii) historical grade data.

Participation: During lectures and discussion, you will be assigned short exercises or tasks to complete. You will submit this work on CCLE.

Scoring: for each activity, by participating and submitting your work, you will generally earn 1 point. If the work is not submitted or is of an extremely poor quality, you will earn 0. For participation overall in the course, full marks are earned for earning 80% of all points. So if there were 15 possible points, earning 13 (87% of points) would translate to 100% ($87/80 > 1$) for participation, and earning 9 (60% of points) would translate to 75% for participation ($60/80$). This is really about participation and thinking in-class, and not a serious form of assessment!

By participating in the course evaluations at the end of the quarter, your overall course percentage will be rounded up to the next whole percentage after the grade boundaries have been set but before assigning your letter grade; this could be beneficial if you wind up near a grade bracket boundary.

Unit Tests: There will be 2 unit tests taking place during the discussion time with official dates and more tentative topics below:

- February 12 (Front End: HTML, CSS, basic JavaScript)
- March 7 (Back End: PHP and basic databases)

The tests will take place in the lecture room. The tests will include a written component and a practical component (making (a) simple webpage(s) that do(es) something) with a computer.

During the unit tests, you are banned from:

- any communication with each other, verbal or otherwise;
- exposing your work or looking at another's work;
- sending/receiving files to/from each other or accessing or viewing data of another student, directly or indirectly;
- using email or your phone other than to log in to CCLE;
- using any chat functionalities on any websites or apps;
- using SCP, SSH, or FTP Clients unless otherwise stated at the exam, and only if permitted may you use them in the prescribed manner;
- using a computer other than the PIC Desktop machines;
- accessing files that were previously saved on your computer;
- posting questions on Stack Overflow; and
- communicating with each other via CCLE (also note the first point that you cannot communicate at all!).

However, for the practical components of the tests, you may use other online resources, including the course notes.

The written components will be strictly closed-book with no notes or reference material permitted.

You will be closely monitored during the exams. This could include pictures being taken. Should any cheating be observed, the photographic proof along with a report on the cheating will be immediately sent to the Dean of Students to determine appropriate disciplinary action. Under no circumstances will forgetfulness or lack of knowledge of the regulations be accepted as a plea.

Note that modifying a unit test webpage after the deadline will result in a grade of 0, in addition to the case being reported as cheating. You may not change anything about a unit test webpage after 8:50 the day of a unit test.

Homework: There will be 5 homework assignments. In each homework, you will be required to produce a live webpage by a given deadline. You will be required to submit your homework files on CCLE, but the homework reader will grade your live website, so you have to make each website live and functional by the deadline.

Note that modifying a homework webpage after the deadline will result in a grade of 0, in addition to the case being reported as cheating.

In no way, shape, or form should you modify a homework file, no matter how small the change, after the deadline – not to fix a typo, or anything of the sort.

The assignments will be posted on CCLE.

Homeworks will be tested with either Firefox or Chrome web browsers. Each homework will be scored out of 20 points as below (refer to the **HW_Codes** document for a list of required coding practices and techniques that are required for homework):

Output (10 points): the submission should perfectly match the description given in the homework.

- 0 ← output/display is far from desired, or violates homework specifications
- 3 ← some progress towards correct behavior/display/output

- 5 $\leftarrow$ the behavior/display/output is a good step towards the correct output
 - 8 $\leftarrow$ the behavior/display/output is mostly correct, but not a complete match to the desired output
 - 10 $\leftarrow$ the behavior/display/output is a perfect match to the requirements.
- Other scores are not possible in the “Output” category

Good coding practice, presentation, and readability (10 points): presentation of code, robustness, etc.
 Let G = # of guidelines not followed
 Score in this section = Output score - G

Final Examination: There will be a brief (90-minute), written final on Monday, March 18 at 3:30 pm. It will cover all parts of the course with roughly equal weighting.

The final exam will be strictly closed-book with no notes, electronic devices, or other references allowed.

More details will be given.

Final Project: You will need to design a webpage that encompasses all aspects of the course (HTML5, CSS3, JavaScript, PHP, and databases). The project is due Monday, March 18, at 3 pm.

In addition to building the webpage, as part of your project score, you will present your webpage to the class in week 10 on March 14 and March 15. You must attend the presentations of your classmates.

More details will be given.

FORMAL POLICIES:

Missing Work: If the final exam is missed for a valid reason and your overall course percentage computed by excluding the final exam is above 75%, you will be given an oral final exam to make up for the missed exam. University policy states that you cannot pass the course unless you take the final exam.

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

If a unit test is missed for any reason, its grade will be replaced by the final exam grade. There are no makeup unit tests.

Because one of 5 homeworks will be dropped and only 80% of participation points are required to earn 100%, no homework grades or participation scores will be excused, even for a valid, documented absence, even for students who register late. The purpose of dropping an assignment and some participation points is not leniency; the purpose is to account for unforeseen circumstances such as sickness, needing to travel, medical appointments, joining late, and the likes.

Collaboration Policy: You must identify all collaborators on your assignments and you must do your own work!

At the top of every assignment, you should declare the following:

I, [YOUR NAME], declare that this work is my own. I did this work honestly and can fully stand behind everything that I have written.

I did not copy code from anyone, student or otherwise.

And, if a collaboration took place, also add:

I collaborated with [NAMES OF COLLABORATORS] and I affirm that we all contributed equally in the code.

Under no circumstances does the above declaration entitle you to copy the work of other students! You should also not allow your work to be copied by others as that will only hurt them on exams.

Center for Accessible Education: If you have a documented disability, please contact the Center for Accessible Education and have them consult with your instructor to ensure you are accommodated. It is your responsibility to do this in a timely manner. Special exam accommodations will not be provided by the instructor or TAs.

Regrading: The unit tests will be returned at the discussion section. 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 some 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 your TA in person within 5 business days of the homework grade release date (or by the date of the final exam in the case of the final assignment). Your TA will be in-charge of the homework regrades and your mark could stay the same, go up, or (in some cases) go down.

All marks are final after a regrade.

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: getting someone else to do one's homework/projects, accessing prohibited materials on an exam, modifying a homework after its submission deadline, 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 verbatim (even if you change the variable names, etc., that's plagiarising!), taking work from websites and presenting it as your own, adjusting your answers to an exam after it has been graded and requesting a regrade.

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 TA. Generally emails will not receive a response.

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. Also note that some email clients seem to block email replies given from math.ucla.edu: yahoo is particularly bad for this.

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

GENERAL:

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

Lateness and Talking: If you do arrive late, please enter with your notebook/laptop, pen, etc. ready and be as quiet as possible to avoid interrupting others.

Unless there is an in-class problem you have been assigned to work on (in which case you are encouraged to talk!), you should not be talking during the lectures or discussions. It is disruptive and rude to both your instructor and your fellow classmates; talking will not be tolerated.

Electronic Devices and Distractions: Please turn off the noise 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 avoid distracting others.

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

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

SUCCESS TIPS:

- Attend class. Hearing information live, doing problems, and being able to ask your own questions is important and correlates strongly with exam performance.
- Attend your discussion sections. Lecture time is very limited: there is reason why 2 hours per week are scheduled for this course outside of lectures.
- Do not get behind: once there is a topic you are weak with, it could very well prevent your understanding subsequent topics. The material does build.
- Beware the “familiarity fallacy”: just because you've seen a topic before, doesn't mean that you have mastered it.
- Make use of office hours and CLE discussions.
- Don't be afraid to speak with your instructor or TA: you are not just a number!