

Policies

Course Info

The EECS 16AB series (Designing Information Devices and Systems) is a pair of introductory-level courses introducing students to EECS. The courses have a particular emphasis on how to build and understand systems interacting with the world from an informational point of view. Mathematical modeling is an important theme throughout these courses, and students will learn many conceptual tools along the way. These concepts are rooted in specific application domains. Students should understand why they are learning something.

An important part of being a successful engineer is being able to identify the important and relevant structure in a complex problem while ignoring minor issues. EECS 16A focuses on modeling as abstraction: how can we see the relevant underlying structure in a problem? It introduces the basics of linear modeling, largely from a "static" and deterministic point of view. EECS 16B deepens the understanding of linear modeling and introduces dynamics and control, along with additional applications. Finally, EECS 70, (which can be thought of as the third course in this sequence -- except without any labs), introduces additional discrete structures for modeling problems, and brings in probability.

In EECS 16A in particular, we will use the application domains of imaging and tomography, smartphones and touchscreens, and GPS and localization to motivate and inspire. Along the way, we will learn the basics of linear algebra and, more importantly, the linear-algebraic way of looking at the world. The emphasis will be on modeling and using linear structures to solve problems; the class is not just focused on how to do computations. We will learn about linear circuits, not merely as a powerful and creative way to help connect the physical world to what we can process computationally, but also as an exemplar of linearity and as a vehicle for learning how to do design. Circuits also provide a concrete setting in which to learn the key concept of "equivalence" -- an important aspect of abstraction. Our hope is that the concepts you learn in EECS 16A will help you as you tackle more advanced courses and will help form a solid conceptual framework that will help you learn throughout your career.

Grade Breakdown

Update, March 10th: All students will now given 20/20 (100%) for their participation requirement (yay, free points!). Please continue to attend lecture and discussion - these are essential parts of the class, and as we transition to remote learning, much of the responsibility for continuing to participate and learn is placed on you, as students.

Our objective is to help you become the best engineer you can be, and grades are not everything. The various components of the class -- homework, labs and exams -- are designed explicitly with this in mind. Every challenge is a growth opportunity. You will have the opportunity to gain points in the course through completing your homework and attending labs as well as through the exams.

This course is not graded on a curve. We will set absolute thresholds for performance that will map to grade boundaries. We encourage you to discuss the course material with each other and teach each other new ideas and concepts that you learn. Teaching the material is one of the best ways to learn, so discussing course material with colleagues in the class is a win-win situation for everyone. Grades are not everything, far from it, but that said, here is the breakdown for grading for this class.

Participation	20 points
Homework	35 points
Labs	45 points
Midterm 1	50 points
Midterm 2	50 points
Final	100 points



Notice that you can get many points by being regular with your homework and the labs. Our goal is to help you learn the material as best as possible!

Grading Scale

This course is not curved. We define the following grading scale (in percentages):

A+	[100+]	A	[93+]	A-	[90+]
B+	[84+)	B	[75+)	B-	[68+)
C+	[65+)	C	[62+)	C-	[58+)
D+	[57+)	D	[55+)	D-	[53+)
F	[0-, 53)				

In the rare event that the instructors deem that a change needs to be made for a given exam, then you will be told where the grade boundaries are for that exam and how to adjust your score on the exam to get your points on the above scale. You will always know how you are doing in the course grade-wise.

Exam Clobber Policy

This course spans a fairly broad set of ideas and concepts within a short period of time, and hence sustained and consistent effort and investment are critical to your success in this class. Similarly, by far the most common operating mode we have observed in previous students who struggled and/or failed this class was attempting to do the bare minimum in general and then catch up/cram right before the exams.

In order to formally encourage all of you to maintain the sustained effort that we have observed to be critical to success, we will be adopting a new policy regarding exam clobbering, participation, and effort. Specifically, for students who (1) complete an optional midterm redo and (2) perform significantly better on the final exam, we will provide the opportunity to clobber a midterm.

If you qualify for the clobber (i.e. (1) and (2)), you may replace your lowest midterm score with your scaled score on the final exam according to the formula below.

Replacement MT score (on scale of 100) = $\max[\text{MT score}, \text{final exam score} - 15\% \text{ (on scale of 100)}]$ This essentially allows you to replace your midterm grade by a higher grade --- we want to reward improved performance.

If you complete the optional midterm redo for both midterms, and are eligible for a clobber on both midterm, the clobber that helps your score more is applied (i.e. you may clobber either Midterm 1 or Midterm 2, but not both, and only if you complete both midterm redos). Please note that even though lecture attendance is not included (for logistical reasons) in the two criteria for clobbering eligibility, we do strongly encourage you to attend lecture in person.

Exam Attendance Policy

You must attend at least two of the three exams (Midterm 1, Midterm 2, Final Exam) in order to pass the class. We will consider granting an incomplete given extenuating circumstances. Simply not attending the final exam does not ensure an automatic failure.

Participation

Update, March 10th: Everybody will be getting full participation points. Ignore the below for this Sp20 semester.

Participation is worth a maximum of 20 points, and is measured by discussion attendance - to get full participation credit, you must attend 16 discussions throughout the course of the semester. Your grade will be prorated by the number of discussions you attend; i.e., if you attend 12 discussions, you will have $12/16 * 20 = 15$ points in this category.

Homework Party

Update, March 10th: HW Party will be structured differently going forward. To enter HW Party, click this link (https://docs.google.com/document/d/1NHktQAwtJ55ljXevgS13I2_K5X6Z5yLn54NF6K2eMpY/edit?usp=sharing) for instructions.

Homework parties are your chance to meet and interact with other students, while also having the chance to get help from GSIs, Tutors and Faculty. This is your chance to have a social experience as part of the class. We expect students to treat each other with respect during homework parties as well as during all other parts of the class -- including interactions on Piazza, discussion and office hours. Remember that each of you is coming into a class with different experiences and backgrounds -- use this as an opportunity to learn from one another.

Thursdays 9-11AM, and Thursdays 2-4PM, HW Party will be held in Soda's Wozniak Lounge or Cory 144MA. Check the course calendar for location. Attending homework party is highly encouraged.

Students are expected to help each other out, and if desired, form ad-hoc "pickup" homework groups in the style of a pickup basketball game. We highly encourage students to attend homework party.

Homework Submission

Homeworks are due on Friday night at 11:59 PM. You need to turn in a .pdf file consisting of your written-up solutions that also includes an attached pdf "printout" of your .ipynb code on Gradescope; you may use your phone camera or any page-scanning app in order to turn your written homework into a PDF, as long as your work is clear and legible. In addition, Gradescope has an option to associate pages of your work to each homework problem. You must select the relevant pages for every problem. **Any homework submissions that are turned in without the code "printout" (or screenshot) attached will receive a zero on the coded ipython notebook portions of the homework. Any problems without pages selected will receive zero credit.** If you have any questions about the format of a homework submission, please go to office hours or homework party.

You will have the opportunity to resubmit your homework after homework solutions are released to get makeup credit. See below for details.

Homework Grading – Self-Grading

The point of homework in this class is for you to learn the material. To help you in doing this each student will grade their own homework in addition to being graded by 16A readers. After the HW deadline, official solutions will be posted online. You will then be expected to read them and enter your own scores and comments for every part of every problem in the homework on a simple coarse scale:

Score	Reason
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0	Didn't attempt or very very wrong
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2	Got started and made some progress, but went off in the wrong direction or with no clear direction
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Score	Reason
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5	Right direction and got half-way there
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8	Mostly right but a minor thing missing or wrong
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10	100% correct
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Note: You must justify self-grades of 2, 5, or 8 with a comment. Grades of 0 and 10 do not need to be justified. If you are really confused about how to grade a particular problem, you should post on Piazza. This is not supposed to be a stressful process.

We will hold extra office hours that will do HW run-throughs after the HW solutions have been released. These will be held on Monday, and we encourage you to attend them to ask questions about grading and clarify your understanding of the HW and solutions.

Your self-grades will be due on the Monday following the homework deadline at 11:59 PM sharp. We will accept late self-grades up to a week after the original homework deadline for 65% credit on the associated homework assignment. If you don't enter a proper grade by this deadline, you are giving yourself a zero on that assignment. Merely doing the homework is not enough, you must do the homework; turn it in on time; read the solutions; do the self-grade; and turn it in on time. **Unless all of these steps are done, you will get a zero for that assignment.**

We will automatically drop the lowest homework score from your final grade calculation. This drop is meant for emergencies. If you use this drop half-way into the semester, and request another, we cannot help you. EE47D students will not have their lowest homework score dropped.

Just like we encourage you to use a study group for doing your homework, we strongly encourage you to have others help you in grading your assignments while you help grade theirs.

Course readers are going to be grading and sending you occasional comments. Because we have reader grades, we will catch any attempts at trying to inflate your own scores. This will be considered cheating and is definitely not worth the risk. Your own scores will be used in computing your final grade for the course, adjusted by taking into account reader scores so that everyone is fairly graded effectively on the same scale. For example, if we notice that you tend to give yourself 5s on questions where readers looking at your homeworks tend to give you 8s, we will apply an upward correction to adjust.

Reader grades will be released on Gradescope about one week after the homework deadline. Readers grade questions either on a "coarse" or "fine" scale for each homework part. Coarsely graded question parts are worth a single point and are based on effort. Finely graded question parts are worth a total of 10 points and are graded using the same self-grading rubric above. Homework regrade requests are typically due on Gradescope within 72 hours of reader grades being released. If a regrade request is submitted for a part of a question on the homework, the grader reserves the right to regrade the entire homework and could potentially take points off.

If you have any questions, please ask on Piazza.

Homework Resubmission

Again, the point of homework in this class is to help you learn. We understand that sometimes work from other classes, midterms or your personal life can come in the way of making a homework deadline. For this reason we will allow you to resubmit your homework for 70% credit. **Homework resubmissions must be HANDWRITTEN. Homework resubmissions will be due along with the self-grades, so they will be due by 11:59pm Monday night. If you choose to resubmit your homework, you must submit two sets of self-grades, one for the first submission and one for the second submission. For the second submission do self-grades as normal. We will apply the 70% correction.**

What does 70% credit mean? Let us say you only were able to get halfway through a problem during the first submission. You submitted your homework on Friday, and while going through the solutions you figured out how to do the whole problem. Your self-grade for your first submission would be a 5/10. However, you can resubmit the homework problem with a fully correct solution and receive 70% of the remaining points as extra points, i.e. $(10-5) * 70/100 = 3.5$ extra points, and so your score for the problem would go from 5 points to 8.5 points.

Homework Effort Policy

Because the point of homework in this class is to help you learn, not to punish you for making small mistakes, if your final score (after resubmission and any other corrections are applied) on any homework is above 8/10, your grade will automatically be bumped up to 100% (10/10). If your final score is less than 8/10, it will be scaled accordingly so that a 6/10 will result in 75% (7.5/10).

Lab and Discussion Section Policies

Update, March 10th: Discussion is now remote. There are no more in-person discussions; you should still attend both a Monday and a Wednesday discussion. Recorded discussions will be available from now on at eecs16a.org. Discussion permalinks (will be filled out soon): The 11:00 AM section, with Nirmaan and Jesse, will be a special interactive section - wherein we'll try several methods via Zoom to allow for more interactivity, like a real discussion.

Labs for this class are not open section, **you must go to your assigned lab section**. If you finish the lab early, we encourage you to help other groups debug their lab. This will help you learn the material better and contribute towards a better learning experience for everyone.

You should aim to get checked-off by the end of your lab section. If you attend your whole lab section but do not finish in time, you may get checked-off at the beginning of your next lab section before starting the following lab. While labs are not meant to be burdensome, they are an essential part of the course. We have the following strict grading policy for labs: **If you complete all the labs, you will receive full lab credit. If you fail to complete one lab, you will receive 43/45 lab credit. If you miss two labs, you will receive 30/45. If you miss three or more labs, you will get an F in the class.**

Number of Missed Labs	What Happens?
0	You get full lab credit - 45/45
1	You get almost full lab credit - 43/45
2	You get half lab credit - 30/45
3 or more	You Fail the class - final letter grade: F

Some lab sections are “buffer labs.” “Buffer weeks” occur during several-day periods in which no new labs begin, and makeup labs are offered on a limited schedule. During buffer lab weeks, you may get checked off for **only one lab** that occurred during that lab module. No other labs can be checked off. You may **sign up** to attend any buffer lab held during a buffer week, and each buffer week’s **schedule will be different** . More details on buffer lab sections and signups will be announced on Piazza for every module.

Wires on lab breadboards must be planar. Lab staff will ask students to redo their circuits before debugging them if the wires are non-planar. The definition of planar wires on a breadboard is shown below:

