

**SUMMER 2019**

**FALL 2019**

**SPRING 2020**

"Complete machine learning part for the app for off-campus job at Smecta"

"Learn Angular web app development do some projects"

"Apply Angular at work for website"

"Complete the project for Konstantin and release it on Foothill web page."

"Add app tile on My Portal"

"Complete scheduler for tutors"

"Complete courses at College"

"Transfer to university."

SUMMER 2020

CS 61A  
(ONLINE)

CONTINUE  
JOBS

PAPERWORK  
TO  
TRANSFER

FALL 2020

EE 120

EE 117

CS 150

APPLY  
FOR  
INTERNSHIPS

SPRING 2021

EE 16A

CS 61B

CS 70

LEARN  
ANDROID  
DEVELOPMENT

SUMMER 2021

DO  
INTERNSHIP

VISIT  
INDIA

GET  
VACCINES

FALL 2021

EE 16B

CS 61C

CS 168

ANDROID  
APP  
PROJECT

SPRING 2022

EE 134

CS 189

EE 184

APPLY FOR  
INTERNSHIP

SUMMER 2022

OPTIONS  
AFTER  
GRADUATION

DO  
INTERNSHIP

HEALTH  
CHECK UP

FALL 2022

EE 105

EE 130

EE 140

GRADUATE

SPRING 2023

APPLY FOR  
MASTERS  
PROGRAM

APPLY FOR  
OPT

APPLY FOR  
OPT

SUMMER 2023

START  
JOB

IOS-LEARN  
DEVELOPMENT

FALL 2023

START  
SAVINGS

CONTINUE  
JOB

LEARN  
CYBERSECURITY

SPRING 2024

CONTINUE  
JOB

LEARN DEEP  
LEARNING

LEARN  
UNSUPERVISED  
MACHINE LEARN

SUMMER 2024

CONTINUE  
JOB

WORK ON  
STARTUP

VISIT  
INDIA

FALL 2024

BRING  
PARENTS  
TO USA

WORK ON  
STARTUP

CONTINUE  
JOB

COMPLETE  
ML GUI  
PROJECT

SPRING 2025

CONTINUE  
JOB

SAVE FOR  
HIGHER  
EDUCATION

WORK ON  
STARTUP

SAVE FOR  
SISTER'S  
EDUCATION

SUMMER 2025

FALL 2025

SPRING 2026

WORK vs  
MASTERS

FAMILY  
VACATION

CONTINUE  
JOB

## Questions I need answers to:

- a) Can I do a double major, if my first major is a double major itself?
- b) Is my academic plan good for me?
- c) Any extra courses that I may need?
- d) Should I go for Master's degree straight off?
- e) How can I achieve financial stability?
- f) Working vs higher education?
- g) University Campus programs that can benefit me?
- h) Scholarships at your institution?
- i) Should I work while studying?
- j) How can I better achieve my goals?
- k) Can I get funds from university to work on projects?

—x—

- (I.D. i) The electrical engineering courses can make use of MATLAB as an essential tool to record data and plot data points to represent working principles of circuits with less work. (like EE 105, 120, 130, 140, 16A, 16B)
- (I.D. ii) MATLAB is a really important tool for me as I plan to do Machine Learning and Artificial Intelligence. My online courses at Coursera & Udacity frequently use MATLAB.
- (I.D. iii) Machine Learning, Deep Learning, Arduino interface, Stimulink and Computer vision tools.



Sample Curricula: **EECS/MSE Joint Major**

Year	Fall	Spring
<b>Freshman</b>	Math 1A	Math 1B
	Chem 1A and AL/4A	Physics 7A
	Humanities/SS (3-4 units)	CS 61A
	R&C A (4 units)	R&C B (4 units)
<b>Sophomore</b>	Math 53	Math 54
	Physics 7B	Physics 7C
	E 45	EE16A
	CS 61B or BL	Humanities/SS (3-4 units)
<b>Junior</b>	CS 61C or CL/EE 16B	MSE 103
	MSE 102	EE 105
	Physics 137A	MSE 104
	E 115/Physics 112	CS 61C or CL/EE 16B
		EE 126/STAT 134
<b>Senior</b>	EE 117	EE 126
	EE 140/141	MSE 111/EE 130
	MSE 130	Technical Elec. (3-4)
	Physics 141A	Technical Elec. (3-4)
	Humanities/SS (3-4 units)	Humanities/SS (3-4 units)

Technical electives must include two courses:

- (1) one course from the following: CS 150; EE 119, 143;
- (2) at least three 3 units from the MSE 120 series courses.

## Core Courses and Electives: **Electrical Engineering**

Focus on:

	Integrated Circuits	Communications	Robotics & Mechatronics	Semiconductor Manufacturing
<b>Core Courses</b>	EE 105 EE 120 EE 130 EE 140 EE 141	EE 120 EE 121 EE 122 EE 123 EE 126	EE 105 EE 120 EE 125 EE 128 EE 149 EE 192	EE 105 EE 130 EE 143
<b>Electives</b>	EE 117 EE 118 EE 123 EE 126 EE 128 EE 137B EE 142 EE 143 EE 147 EE 149 CS 150	EE 127 EE 128 EE 144 EE 145B CS 150 CS 168 CS 170 CS 186 CS 188 CS 189 Math 110 Math 104 Math 128A/B	EE 192 EE 123 EE 145L EE 145M EE 145O CS 150 CS 188 ME 102A/B ME 104 Math 110 Math 104	EE 117 EE 118 EE 120 EE 126 EE 134 EE 137A/B E 45 MSE 102 MSE 103 MSE 104 MSE 130 Physics 137A/B Physics 141A/B

# Electrical Engineering & Computer Sciences

Junior Transfer sample plan to graduate in 2.5 years

UC Berkeley

Fall
CS 61A
EE 16A or EECS 47D
Upper Division Humanities/Social Science

Spring
CS 61B
EE 16B
CS 70

Fall
CS 61C
Upper Division EECS
Upper Division Humanities/Social Science

Spring
Upper Division EECS
Upper Division EECS
Ethics Course

Fall
Upper Division EECS
Upper Division EECS

## Notes:

- **Students in the College of Engineering must complete no fewer than 120 semester units and meet other College, Campus, and University Requirements.**
- This is a sample program plan. This plan assumes that the student has completed certain requirements at their previous institution, including the American History & Institutions requirements.
- Students must meet with an academic adviser to determine a personal program plan. Your program plan will differ depending on previous credit received, recommendations from your faculty adviser, and available offerings.
- Students who have not already fulfilled four H/SS courses prior to transfer will need to take additional H/SS courses. At least two must be upper division (#100-199)

# Joint Major in Electrical Engineering and Computer Sciences and Nuclear Engineering

Freshman Fall
Math 1A
Chem 1A and AL/4A
CS 61A
Reading & Composition A <sup>†</sup>
NE 24

Freshman Spring
Math 1B
Physics 7A or 5A
CS 61B or BL
Reading & Composition B <sup>†</sup>

Sophomore Fall
Math 53
Physics 7B or 5B/5BL
E 45
EE 16A

Sophomore Spring
Math 54
Physics 7C or 5C
EE 16B
NE 100

Junior Fall
E 115
NE 101
EE 120
Humanities/Social Sciences with ethics content

Junior Spring
NE 150
EE 126 or STAT 134
NE 104
Humanities/Social Sciences

Senior Fall
EE 105
Technical Elective*
Technical Elective*
Technical Elective*
UD Humanities/Social Sciences

Senior Spring
NE 170A
EE 117
Technical Elective*
Technical Elective*
UD Humanities/Social Sciences

▪Students in the College of Engineering must complete no fewer than 120 semester units and meet other College, Campus, and University Requirements.

\*Technical electives include: At least 9 units of additional upper-div NE courses and at least 8 units of additional upper division EECS courses

† The R&C requirement must be completed by the end of Sophomore year



[Home \(https://eecs.berkeley.edu/\)](https://eecs.berkeley.edu/) / [Resources \(/resources\)](/resources) / [For Undergrads \(/resources/undergrads\)](/resources/undergrads) / [EECS Major \(/resources/undergrads/eecs\)](/resources/undergrads/eecs) / Upper Division Degree Requirements

# EECS Major Upper Division Degree Requirements

Upper division courses give you in-depth exposure to one or more areas of EECS. As such, most students choose to take more than the minimum requirements listed below. Please refer to the [Berkeley Academic Guide \(http://guide.berkeley.edu/\)](http://guide.berkeley.edu/) for detailed course descriptions.

## Upper Division EECS Requirements

Students must complete a minimum of 20 units of upper division EECS courses. One course must provide a major design experience, and be selected from the following list:

- [EE C106A, C106B, C128, 130, 140, 143, C149, 192 \(https://www2.eecs.berkeley.edu/Courses/EE/\)](https://www2.eecs.berkeley.edu/Courses/EE/)
- [CS C149, 160, 162, 164, 169, 182, 184, 186 \(https://www2.eecs.berkeley.edu/Courses/CS/\)](https://www2.eecs.berkeley.edu/Courses/CS/), [W186 \(https://www2.eecs.berkeley.edu/Courses/CS/\)](https://www2.eecs.berkeley.edu/Courses/CS/)
- [EECS 149, 151 and 151LA \(must take both\), 151 and 151LB \(must take both \(https://www2.eecs.berkeley.edu/Courses/EE/\)\)](https://www2.eecs.berkeley.edu/Courses/EE/)
- **CS 161 will fulfill the design requirements for students who took the class in Spring 2019 or later.**

*Please note that some upper division courses may not fulfill these requirements. These include EE/CS H196 A or B, 197, 198, 199, and other non-technical courses.*

*Additionally, no more than two graduate-level courses can be used to fulfill requirements for your B.S. degree. Undergraduate students must submit a petition to the department to use graduate-level courses to fulfill requirements. The following courses have already been approved to count toward the 20 upper division EECS unit requirement and a petition is not necessary: [INFO 159 \(http://guide.berkeley.edu/search/?P=INFO%20159\)](http://guide.berkeley.edu/search/?P=INFO%20159), [COMPSCI 270 \(http://guide.berkeley.edu/search/?P=COMPSCI%20270\)](http://guide.berkeley.edu/search/?P=COMPSCI%20270), [COMPSCI C280 \(http://guide.berkeley.edu/search/?P=COMPSCI%20C280\)](http://guide.berkeley.edu/search/?P=COMPSCI%20C280), [EL ENG 229A \(http://guide.berkeley.edu/search/?P=EL%20ENG%20229A\)](http://guide.berkeley.edu/search/?P=EL%20ENG%20229A), [COMPSCI 294-84 \(Interactive Device Design\)](http://guide.berkeley.edu/search/?P=EL%20ENG%20229A), and [COMPSCI 294-129 \(Designing, Visualizing and Understanding Deep Neural Networks\)](http://guide.berkeley.edu/search/?P=EL%20ENG%20229A).*

**[EECS Degree Requirement Worksheet \(https://engineering.berkeley.edu/sites/default/files/docs/eecs-worksheet-2018.pdf?\\_ga=2.186594607.707667831.1580760638-1839037553.1580760638\)](https://engineering.berkeley.edu/sites/default/files/docs/eecs-worksheet-2018.pdf?_ga=2.186594607.707667831.1580760638-1839037553.1580760638)**

## Ethics Requirement

### For Undergrads

[EECS Major \(/resources/undergrads/eecs\)](/resources/undergrads/eecs)

- > [Lower Division Degree Requirements \(/resources/undergrads/eecs/degree-reqs-lowerdiv\)](/resources/undergrads/eecs/degree-reqs-lowerdiv)
- > [Upper Division Degree Requirements \(/resources/undergrads/eecs/degree-reqs-upperdiv\)](/resources/undergrads/eecs/degree-reqs-upperdiv)
- > [Sample Study Plans \(/resources/undergrads/eecs/study-plans\)](/resources/undergrads/eecs/study-plans)
- > [Advising \(/resources/undergrads/eecs/advising\)](/resources/undergrads/eecs/advising)
- > [Change of/Multiple Majors \(/resources/undergrads/eecs/cal-transfers\)](/resources/undergrads/eecs/cal-transfers)
- > [Junior Transfers \(/resources/undergrads/eecs/junior-transfers\)](/resources/undergrads/eecs/junior-transfers)
- > [Women Engineers \(/resources/undergrads/eecs/women\)](/resources/undergrads/eecs/women)

[CS Major \(/resources/undergrads/cs\)](/resources/undergrads/cs)

[Academic Support \(/resources/undergrads/support\)](/resources/undergrads/support)

Students must complete one course about engineering ethics or the social implications of technology. Unlike the other EECS major requirements, the ethics requirement may be completed with a "P" grade:

- BioE 100: Ethics in Science and Engineering
- CS 195 or H195: Social Implications of Computer Technology
- ENERES C100: Energy and Society
- ENGIN 125: Ethics, Engineering and Society or 157AC: Engineering, Environment, and Society
- ENGIN 185: The Art of STEM Communication
- History C184D: Human Contexts and Ethics of Data
- Info 88A: Data and Ethics
- IAS 157AC: Engineering, the Environment, and Society
- ISF 100D: Introduction to Technology, Society, and Culture or 100G: Introduction to Science, Society, and Ethics

## Technical Engineering Units

Students must complete a minimum of 40 units of technical engineering coursework. This includes the required lower and upper division required courses in EE, CS, and EECS.

The 40 units of engineering courses **CANNOT** include:

- any course taken on a P/NP basis
- courses numbered 24, 39, 84
- BioE 100
- ChemE 185
- **CS 70**, C79, 195, H195
- Des Inv courses except (Des Inv 15, 22, 90E, 190E)
- Engin 125, 157AC, 180, 185
- IEOR 95, 185, 186, 190 series, 191, 192, 195
- ME 191AC, 190K, 191K

## College Requirements

Students in the College of Engineering must complete no fewer than 120 semester units and meet other [College, Campus,](#)

[Faculty Advising \(/resources/undergrads/faculty-advising\)](/resources/undergrads/faculty-advising)

[The CS Minor \(/resources/undergrads/cs/minor\)](/resources/undergrads/cs/minor)

[The EECS Minor \(/resources/undergrads/eecs-minor\)](/resources/undergrads/eecs-minor)

[The EIS Minor \(/resources/undergrads/eis-minor\)](/resources/undergrads/eis-minor)

[Undergrad Research \(/resources/undergrads/research\)](/resources/undergrads/research)

[Scholarships \(/resources/undergrads/scholarships\)](/resources/undergrads/scholarships)

[Preparing for Grad School \(/resources/undergrads/grad-school\)](/resources/undergrads/grad-school)

[Honors Program \(/resources/undergrads/honors\)](/resources/undergrads/honors)

[CS Scholars \(/cs-scholars\)](/cs-scholars)

[Creating DeCal Classes \(/resources/undergrads/decal\)](/resources/undergrads/decal)

[Curricular Practical Training \(CPT\) \(/resources/undergrads/cpt\)](/resources/undergrads/cpt)

[EECS Study Abroad Program \(/resources/undergrads/study-abroad\)](/resources/undergrads/study-abroad)

[Accel Scholars \(/resources/undergrads/accel\)](/resources/undergrads/accel)

[Getting into EE Classes \(/resources/undergrads/getting-into-ee-classes\)](/resources/undergrads/getting-into-ee-classes)

[and University Requirements. \(https://engineering.berkeley.edu/academics/undergraduate-guide/degree-requirements\)](https://engineering.berkeley.edu/academics/undergraduate-guide/degree-requirements)

(https://eecs.berkeley.edu/)

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