

General Engineering Academic Requirements

2025-2026

UC SANTA BARBARA
College of Engineering

2025-2026 Academic Calendar

Note: Dates subject to change without notice.

	Fall 2025	Winter 2026	Spring 2026
Quarter begins	September 21, 2025	January 5, 2026	March 30, 2026
Pre-instruction Activities	September 22-23, 2025		
First day of instruction	September 25, 2025	January 5, 2026	March 30, 2026
Last day of instruction	December 5, 2025	March 13, 2026	June 5, 2026
Final examinations	December 6-12, 2025	March 14-20, 2026	June 8-12, 2026
Quarter ends	December 12, 2025	March 20, 2026	June 12, 2026
Commencement			June 11-14, 2026

2025-2026 Campus Holidays Observed

 Veterans Day:
 November 11, 2025

 Thanksgiving:
 November 27-28, 2025

 Christmas:
 December 24-25, 2025

 New Year:
 December 31, 2025 - January 1, 2026

 Martin Luther King, Jr. Day:
 January 16, 2026

 Presidents' Day:
 February 19, 2026

 Cesar Chavez Holiday:
 March 27, 2026

 Memorial Day:
 May 25, 2026

 Juneteenth:
 June 19, 2026

 Independence Day:
 July 3, 2026

 Labor Day:
 September 7, 2026

Produced by the College of Engineering, Office of Undergraduate Studies

Glenn Beltz, Associate Dean for Undergraduate Studies Andrew Masuda, Director of Marketing

This publication is available at: https://engineering.ucsb.edu/gear

All announcements herein are subject to revision without notice.

EQUAL OPPORTUNITY AND NONDISCRIMINATION

The University of California, in accordance with applicable Federal and State law and University policy, does not discriminate on the basis of race, color, national origin, religion, sex, gender identity, pregnancy ¹, disability, age, medical condition (cancer related), ancestry, marital status, citizenship, sexual orientation, or status as a Vietnam-era vecteran or special disabled vecteran. The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in University programs and activities.

access, and treatment in University programs and activities.
Inquiries regarding the University's student-related nondiscrimination policies may be directed to the Director of Equal Opportunity at (805) 893-2701.

 $^{^{1}}$ Pregnancy includes pregnancy, childbirth, and medical conditions related to pregnancy or childbirth.



General Engineering Academic Requirements

College of Engineering • University of California • Santa Barbara

Volume 16, Summer 2025

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Requirements and policies in the GEAR are subject to change each academic year.

Message from the Associate Dean



Glenn Beltz, Associate Dean Photo by Emily Swindle

elcome to the College of Engineering at UC Santa Barbara. There are many reasons we are one of the top engineering schools in the nation. We bring together an amazing faculty, the members of which are highly acclaimed in the scientific communities in which they work. UCSB professors are, in fact, among the most cited by their colleagues worldwide, a testament to the quality and creativity of their research. A high percentage of the faculty has been elected to the prestigious National Academy of Sciences and National Academy of Engineering. We have Nobel Prize winners on this campus, several of whom are faculty in engineering and the sciences. We're also home to an amazing group of smart, accomplished, highenergy students. These more than 1,800 undergraduates, pursuing a variety of interests, contribute greatly to the quality of the learning environment as well as to the overall richness of campus life.

We have crafted courses that balance theory and applied science so our students are well prepared for successful careers in academia and in industry. Students especially interested in engineering and industry can take advantage of courses offered in Technology Management. Through coursework and "real

world" experiences, the program gives our students insight into the world of technology from a business perspective. We want our students to understand what transforms a good technical idea into a good business idea. We want to give them a head start at attaining leadership positions in the technology business sector.

With a thriving interdisciplinary environment, our campus culture fosters creativity and discovery. A truly interdisciplinary culture allows all sorts of ideas to cross-fertilize and makes it easy for faculty to work effectively between disciplines to tackle big questions. Visiting scholars tell us they don't often see the kind of openness among departments and ease of collaboration that they find here.

As part of the prestigious and well-established University of California system, we have the resources as well as the breadth and depth of talent to pursue new fields of scientific inquiry. We also bring an entrepreneurial attitude to our research, focusing on applications as much as discovery.

Our leading programs in areas as diverse as biotechnology, artificial intelligence, computer security, materials, nanotechnology, networking, and photonic devices attest to the success of this approach.

At the core of this activity are our students, our central purpose. We encourage you to pursue every opportunity, both inside and outside the classroom, to enhance your education. We have a talented and wise faculty and staff, equipped with extensive knowledge and diverse experience, to help you make decisions about courses and other activities as you pursue your degree. We look forward to having you in our classes, laboratories, and offices as you discover where your interests lead you.

Glenn Beltz Associate Dean for

Undergraduate Studies

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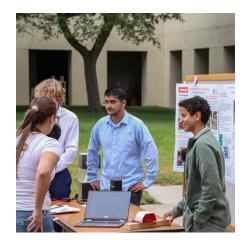




Table of Contents

Message from the Associate Dean	.2
College Overview	
Honors Programs	.4
Education Abroad Program	
Student Organizations	
Change of Major and Change of College	.5
Degree Requirements	.6
Minimal Progress Requirements and College Policy	
Five-Year B.S./M.S. Programs	.7
Advanced Placement Credit	8
A Level Examination Credit	
International Baccalaureate Credit 1	10
General University Requirements 1	11
UC Entry Level Writing Requirement1	
American History and Institutions Requirement	
College General Education Requirements1General Subject Area Requirements1Special Subject Area Requirements1Checklist of General Education Requirements1	11 12
Major Requirements (2025-2026)	
Chemical Engineering1	14
Computer Engineering1	
Computer Science1	18
Electrical Engineering2	
Mechanical Engineering2	22
Additional Resources	24
Academic Year CalendarInside Fron	t Cove
college Policy on Academic Integrity2	24

UC SANTA BARBARA College of Engineering

he College of Engineering at UCSB is noted for its excellence in teaching, research, and service to the community. The college has an enrollment of approximately 1,800 undergraduate students and 830 graduate students with a full-time, permanent faculty of 160. This results in an excellent student to faculty ratio and a strong sense of community in the college.

Our modern laboratory facilities are available to undergraduate as well as graduate students. UCSB has an unusually high proportion of undergraduates who are actively involved in faculty-directed research and independent study projects.

The college offers the bachelor of science degree in five disciplines: chemical engineering, computer engineering, computer science, electrical engineering, and mechanical engineering. The undergraduate programs in chemical, computer, electrical, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

The curriculum for the bachelor of science degree is designed to be completed in four years. Completion of the four-year program provides students with the background to begin professional careers or to enter graduate programs in engineering or computer science, or professional schools of business, medicine, or law. Our curricula are specifically planned to retain both of these options and to assure that our graduates are equally well prepared to enter industry and graduate study. The college and the university offer a wide variety of career counseling and job placement services.

The Office of Undergraduate Studies in Harold Frank Hall, Room 1006, provides academic advising for all undergraduates in the college. Faculty and academic advisors for the individual majors are also provided by the respective departments. This publication contains detailed information about the various programs and schedules and is published yearly. It is available on the web at: https://engineering.ucsb.edu/gear.



Mission Statement

The mission of the College of Engineering is to provide its students a firm grounding in scientific and mathematical fundamentals; experience in analysis, synthesis, and design of engineering systems; and exposure to current engineering practice and cutting edge engineering research and technology. A spirit of entrepreneurship in education, scholarly activity and participation in engineering practice infuses UCSB's College of Engineering.

Special Academic Honors

Honors Program

The Honors Program in the College of Engineering is designed to enrich the educational opportunities of its best students. Students in the Honors Program will be encouraged to participate in experiences in research and in graduate level courses.

Participation in the Honors Program offers housing in Scholar's Halls located in several university-owned residence hall to eligible first-year students, as well as graduate student library privileges to all students in the program. Special lectures and tours may be offered throughout the academic year.

The College of Engineering invites approximately the top 10% of incoming freshmen into the Honors Program based on a comprehensive application review. (Please note: eligibility criteria are subject

to change at any time.) Select transfer students will be invited to join the Program upon admission. Students who do not enter the College of Engineering with honors at the time of admission to UCSB may apply to join the program between first and second year after completing at least 36 letter-graded units with a cumulative GPA of 3.5 or higher.

Continued participation in the College Honors Program is dependent on maintaining a cumulative GPA of 3.5 or greater and active participation in both the academic and community service components of the Program.

To graduate as an Honors Program Scholar, students must complete 6.0 total honors units with a letter-grade of B or higher. Honors units are comprised of coursework from departmental 196, 197, 198, 199 courses, graduate level STEM courses numbered 200-299, and engineering major courses taken through the UC Education Abroad Program. Students must also complete a total of 10 hours of community service for each year they are program members and maintain a 3.5 or higher cumulative GPA at the end of each spring quarter.

Note: Capstone participation/courses do not apply to honors credit, nor do graduate courses taken to satisfy requirements for a graduate degree. Paid research positions cannot apply.

Dean's Honors

The College of Engineering gives public recognition to its outstanding undergraduate students by awarding Dean's Honors at the end of each regular academic term to students who have earned a 3.75 grade-point average for the quarter and have completed a program of 12 or more letter-graded units. Grades of Not Passed automatically disqualify students for eligibility for Dean's Honors. The award is noted quarterly on the student's permanent transcript.

Undergraduate Honors at Graduation

Graduating students of the College of Engineering who have achieved distinguished scholarship while at the university may qualify for Honors, High Honors, or Highest Honors at graduation. The gradepoint thresholds for the honors categories are calculated based on the population of graduates from the preceding academic year. Grade-point averages are not rounded. A minimum of 60 letter-graded units must be completed in order to be eligible for honors. Students should consult the Office of the Registrar's website for specific GPA thresholds each year.

Tau Beta Pi

Tau Beta Pi is the nation's oldest and largest engineering honor society. Its purpose is to honor academic achievement in engineering. Election to membership is by invitation only. To be eligible for consideration, students must be in the top one-eighth of their junior class or the top one-fifth of the senior class. Graduate students and faculty also belong to this honor society. In addition to regular meetings on campus, the organization participates in regional and national activities and sponsors local events, such as tutoring and leadership training, to serve the campus and community.

Education Abroad Program (EAP)

Students are encouraged to broaden their academic experience by studying abroad for a year, or part of a year, under the auspices of the University of California Education Abroad Program. Visit these web sites for more information: eap.ucsb. edu and engineering.ucsb.edu/study-abroad.

Student Organizations

Student chapters of a number of engineering professional organizations are active on the UCSB campus. Students interested in any of these organizations may contact the Office of Undergraduate Studies of the College of Engineering for more information.

- American Association of University Women
- American Indian in Science and Engineering Society
- American Institute of Chemical Engineers
- American Society of Mechanical Engineers
- Assistive Technology Club
- Association of Computing Machinery
- Blockchain at UCSB
- Data Science at UCSB
- Engineering Student Council
- Engineers Without Borders

- Game Development Club
- Google Developers Group
- Institute of Electrical and Electronics Engineers
- Los Ingenieros (Mexican-American Engineering Society/Society of Hispanic Professional Engineers)
- National Society of Black Engineers
- Out in Science, Technology, Engineering, and Mathematics
- Phi Sigma Rho
- Photonics Society at UCSB
- Robotics Club
- SB Hacks
- Society for Advancement of Chicano and Native Americans in Science
- Society of Asian Scientists and Engineers
- Society of Automotive Engineers
- Society of Women Engineers
- Theta Tau
- Women in Computer Science
- Women in Science and Engineering
- Women in Electrical and Computer Engineering

Change of Major and Change of College

Current UCSB students in a non-engineering major, as well as students wishing to change from one engineering major to another, are welcome to apply after the satisfactory completion of a pre-defined set of coursework. However, due to the current demand for engineering majors, students are cautioned that it is a very competitive process and not all applicants will be able to change their majors due to limited space availability. It is incumbent upon students to continue to make progress in a backup major while pursuing a new major in the College of Engineering, and to periodically consult academic advisors in both the desired major as well as the backup major regarding the viability of pursuing the change of major.

Students who enter UCSB as transfer students will not be able to change to or add an engineering major, if not initially accepted into one. Students who began as freshmen who plan to enter an



engineering major or to change from one engineering major to another will be expected to complete at least 30 units at UCSB before petitioning for a change of major. The College of Engineering will not approve students' change of major petitions (within the COE or from a different college at UCSB) after they have completed six regular quarters (not including summer), regardless of their expected total number of units accrued or total quarters completed at the time of graduation. Students may be in their last required change of major course(s) in their sixth quarter. Some majors require that students be accepted to their major before their sixth regular quarter. The college will not approve exceptions to the requirements listed here or on the individual major websites. Please see below for specific requirements and details for each major. Students who take a break from UCSB and complete courses at another institution will have those terms counted toward their completed quarters.

Notwithstanding any of the majorspecific requirements described below, we caution that the capacity of any given program to accept new students changes, sometimes substantially, from year to year.

Chemical Engineering. Admission to the Chemical Engineering major is determined by a number of factors, including each student's academic performance and trajectory, as well as current enrollments in Chemical Engineering classes. Freshmen should apply during the spring term of their freshman year, and may reapply during their sophomore year. Sophomores may only apply one time during the spring term of their sophomore year.

Applicants must have a 3.0 GPA or above, and satisfactorily complete the following courses or their equivalents: Math 3A, 3B, 4A; Chem 1A or 3A, 1B or 3B, 1C or 3C, 2AL and 2BL. Freshman (first-year) applicants are required to take ChE 5 (may be taken concurrently at time of application). Sophomore (second-year) applicants are required to take ChE 5, 10, and 110AB (110B may be taken concurrently at time of application). Recommended courses include: ENGR 3 and Physics 7A-B; please note that the PHYS 7 series is a graduation requirement for Chemical Engineering, and those students intending to change majors must enroll in this sequence.

Computer Engineering. Students may petition to enter the Computer Engineering major once both of the following requirements are met:

- 1. An overall UCSB grade point average of at least 3.5.
- 2. Satisfactory completion at UCSB, with a grade point average of 3.5 or better, of any five classes, including at least two Electrical & Computer Engineering (ECE) classes and two Computer Science (CMPSC) classes, from the following: ECE 10A/10AL, 10B/10BL, 10C/10CL (ECE 10A/10AL, 10B/10BL, 10C/10CL each count as one course), ECE 15A, CMPSC 16, 24, 32, 40. First attempt only.

Acceptance into the major will be based on UC grade point averages, applicable courses completed, and space availability. All students considering changing into Computer Engineering are required to meet with the ECE Academic Advisor during their first year. It is highly recommended that the CE program curriculum is followed to be best prepared to switch into CE, concurrently keeping a backup major plan if the department is not able to accommodate your request to change into CE. Denied change of major applications will not be reconsidered for either major (CE or EE).

Computer Science. The application process is extremely competitive. A very limited number of change of major applications to Computer Science will be approved. Students may apply for consideration to the Computer Science major when the following requirements are met. No exceptions are made for these requirements and meeting these requirements does not guarantee admission to the Computer Science major:

- 1. A cumulative overall grade point average of at least 3.0.
- 2. Satisfactory completion of Computer Science 16, 24, and 40 with a cumulative GPA of 3.2 or higher; First takes only.
- Satisfactory completion of Math 3A, 3B, 4A, and 4B with a cumulative GPA of 3.0 or higher; <u>First takes only</u>.

Denied change of major applications will not be reconsidered. Additional requirements can be found at https://cs.ucsb.edu/education/undergraduate/prospective-students. No exceptions are made for these requirements.

Electrical Engineering. Students may petition to enter the Electrical Engineering major once both of the following requirements are met:

- 1. An overall UCSB grade point average of at least 3.5.
- 2. Satisfactory completion at UCSB, with a grade point average of 3.5 or better, of at least five classes, including at least two mathematics classes, from the following: Math 4B, Math 6A, Math 6B, ECE 10A/10AL, 10B/10BL, 10C/10CL (ECE 10A/10AL, 10B/10BL, 10C/10CL each count as one course), ECE 15A. First attempt only. The calculation of the minimum GPA will be based on all classes completed from this list at the time of petitioning.

Acceptance into the major will be based on UC grade point averages, applicable courses completed, and space availability. All students considering changing into Electrical Engineering (EE) are required to meet with the ECE Academic Advisor during their first year. It is highly recommended that the EE program curriculum is followed to be best prepared to switch into EE, concurrently keeping a backup major plan if the department is not able to accommodate your request to change into EE. Denied change of major applications will not be reconsidered for either major (CE or EE).

Mechanical Engineering. Admission by change of major into Mechanical Engineering is both limited and competitive. Mechanical Engineering requires a minimum of eight core courses from the following list: Math 3A-B; Math 4A-B; Math 6A-B; Physics 7A-B; ENGR 3; Chemistry 1A-1B; ME 10; ME 14, 15, 17 (three of the eight courses must include ENGR 3, ME 14, and ME 17).

Acceptance into the major is based on core course grade point average, applicable courses completed, and space availability. Starting for freshmen fall 2021, ME will be allowing CSU and CCC grades to be included in the minimum eight courses that are calculated for the core GPA (these grades are not calculated into your official UCSB GPA). These grades must be submitted officially and be reflected in GOLD. Students are able to repeat courses as long as they follow the university guidelines for repeating courses.

All students considering changing into Mechanical Engineering must notify an ME Academic Advisor and report all core course grades after each quarter to update core course GPA calculation. It is highly recommended to follow the ME

program as closely as possible to best be prepared to switch into ME; all while keeping a backup major in mind in the likely chance the department is not able to accommodate your request to change into ME.

Degree Requirements

To be eligible for a bachelor of science degree from the College of Engineering, students must meet three sets of requirements: general university requirements, college general education requirements, and major degree requirements.

General University Requirements

All undergraduate students must satisfy university academic residency, UC Entry Level Writing Requirement, American History and Institutions, unit, and scholarship requirements. These requirements are described fully on page 11.

College General Education Requirements

All students must satisfy the general education requirements for the College of Engineering. These requirements are described on page 11.

Major Degree Requirements

Preparation for the major and major requirements for each program must be satisfied, including unit and GPA requirements. These appear in subsequent sections of this publication.

Minimal Progress Requirements

An undergraduate is required to enroll in a minimum of 12 units in each Fall, Winter, and Spring quarters to maintain the minimum cumulative progress as listed on the chart available at engineering.ucsb. edu/minimum-progress. The College of Engineering curricula for all five undergraduate majors are designed to be completed in four years; thus, students who follow the established pattern of courses outlined on their curriculum sheet should be in compliance with this policy. The declaration of a major by a student and its acceptance by the College evidences an obligation on the part of the student to faithfully perform the designated work to the best of their ability. Withdrawal from, or neglect of, any course entered on the study-list associated with said major, or a change in program without the formal permission of the associate dean of the College, renders the student liable for academic probation.

215-Unit and Quarter Enrollment Limitations

The college expects students to graduate within 12 regular quarters for students who are admitted as freshmen and 9 regular quarters for students admitted as junior transfers and with no more than 215 units. College credit earned before high school graduation does not count toward the 215-unit maximum. This includes credit for Advanced Placement and International Baccalaureate examinations, and also college or university credit earned while still in high school.

Students who are admitted as freshmen and remain continuously enrolled will be assessed after 12 regular quarters at UCSB, and transfer students admitted as juniors will be assessed after 9 regular quarters at UCSB. Summer session does not count as a regular quarter in this calculation but units earned in summer session do apply toward the 215-unit maximum.

With the exception of summer sessions, if students leave UCSB and earn a large number of units at one or more other academic institutions while they are away, the number of quarters allowed at UCSB will be reduced in proportion to the number of terms completed elsewhere.

College policy requires students to secure specific approval to continue enrollment beyond the quarter and unit limits noted above. Students who think they may exceed both the quarter limitations and 215 units may submit a Proposed Schedule for Graduation (Study Plan) for consideration by the Associate Dean for Undergraduate Studies, but they should understand that approval is granted in limited circumstances.

Five-Year Degree Programs

B.S. / M.S. in Computer Science. A

combined BS/MS Program in Computer Science provides an opportunity for outstanding undergraduates to earn both degrees in five years. Additional information about this program is available from the Computer Science graduate advisor. Interested students should make their interest known to the department early in their junior year. Advising and application materials are also available in the Department of Computer Science office.

B.S. in Computer Engineering / M.S. in Computer Science

The Computer Engineering Program incorporates the design of computer hardware and software to meet the

needs for various career applications. Students are trained to work with systems ranging from small integrated circuits to worldwide communications networks, from digital watches to supercomputers, and from single-line programs to operating systems. For more information on the program, please consult the Computer Engineering department.

B.S. in Computer Engineering or Electrical Engineering / M.S. in Electrical and Computer Engineering. A

combined BS/MS Program in Computer Science provides an opportunity for outstanding undergraduates to earn both degrees in five years. Additional information about this program is available from the Electrical and Computer Engineering graduate advisor. Interested students should make their interest known to the department early in their junior year. Advising and application materials are also available in the Department of Electrical and Computer Engineering office.

B.S. in Chemical Engineering, Electrical Engineering, or Mechanical Engineering / M.S. in Materials

A combined B.S. Engineering/
M.S. Materials program provides
an opportunity for outstanding
undergraduates in Chemical, Electrical,
or Mechanical engineering to earn both
of these degrees in five years. This
program enables students to develop
all of the requisite knowledge in their
core engineering disciplines and to
complement this with a solid background
in Materials. This combination provides
highly desirable training from an industrial
employment perspective and capitalizes
on the strengths of our internationally
renowned Materials department.

There is a five-year option for students who are pursuing a B.S. in Chemistry in the College of Letters and Science to complete an M.S. degree in Materials. Interested students in their sophomore year should contact the Staff Graduate Advisor in the Materials Department for additional information.

B.S. / M.S. in Mechanical Engineering.

A combined B.S./M.S. program in Mechanical Engineering provides an opportunity for outstanding undergraduates to earn both degrees in five years. Additional information about this program is available from the Mechanical Engineering Undergrad Advising office. Interested students should contact the office fall quarter of

their junior year. In addition to fulfilling undergraduate degree requirements, B.S./M.S. degree candidates must meet Graduate Division degree requirements, including university requirements for academic residence and units of coursework.

B.S. + Master of Technology Management (MTM)

Outstanding undergraduates are able to earn two degrees in five years by completing the one-year MTM degree after the B.S., thereby complementing their technical training with business and management skills and experience. Engineering majors in their junior year can apply to the Engineering + Technology Management (E+TM) Fellows Program, which provides a guaranteed fellowship for and admission into MTM. E+TM Fellows participate in professionalization activities during their senior year to prepare them for careers leading in technology-driven industries.

Undergraduate Certificate Program

The Technology Management Certificate

Department of Technology Management advising@tmp.ucsb.edu www.tmp.ucsb.edu

The Technology Management Certificate program provides students a solid foundation in business fundamentals and entrepreneurship as it applies to new technologies and technology-oriented companies. This certificate serves as an official recognition that the student has a solid grounding in fundamental business strategies and models, opportunity recognition and new venture creation and marketing.

The program also provides access to many professionals familiar with the demands of starting new businesses as well as running existing companies through its extra-curricular offerings.

College Board Advanced Placement Credit

Students who earn scores of 3, 4, or 5 on College Board Advanced Placement Examinations taken before high school graduation will receive 2, 4, or 8 units of credit toward graduation at UCSB for each such test completed with the required scores, provided official scores are submitted to the Office of Admissions.

Students should be advised that college courses taken before or after attending UC may duplicate AP, IB and/or A Level examinations. Additionally, exams may duplicate each other (for example, and AP or IB exam in the same subject area). If the student does duplicate an exam with another exam of the same subject content, and/or an exam with a college course, we will award credit only once.

Advanced Placement Exam	Units	General Ed.	UCSB Course Equivalent
with score of 3, 4, or 5	Awarded	Course Credit	(You may not enroll in these courses for credit at UCSB)
*2D Art and Design	8	none	none
*3D Art and Design	8	none	none
African American Studies	4	AH&I E: 1 course	none
Art History	8 8	F: 1 course	Art History 1
Biology *Calculus AB	4	none none	EEMB 22, MCDB 20 Mathematics 2A, 3A, 34A, or equivalent
(or AB subscore of BC exam)	4	none	Mathematics 2A, 3A, 34A, or equivalent
*Calculus BC	8	none	Mathematics 2A, 2B, 3A, 3B, 34A, 34B, or equivalent
Chemistry	8	none	none
Chinese Language and Culture	Ü		
With score of 3	8	none	See department for level placement
Comparative Government and Politics	4	D: 1 course	none
	2 or 8	none	none
+Computer Science A (beginning S18)			
With score of 3	8	none	none
With score of 4 or 5	8	none	Computer Science 8
Computer Science Principles			
(effective S17 and S18)	8		none
With score of 3 With score of 4 or 5	8	none	none Computer Science 8
Computer Science Principles	O	none	Computer science o
(beginning \$19)			
With score of 3	8	none	none
With score of 4 or 5	8	none	Computer Science 4
*Drawing	8	none	Art 18
*English – Composition and Literature			
or Language and Composition			
With score of 3	8	Entry Level Writing	Writing 1, 1E
With score of 4	8	A1	Writing 1, 1E, 2, 2E, 2LK
With score of 5	8	A1, A2	Writing 1, 1E, 2, 2E, 2LK, 50, 50E
Environmental Science	4	none	Environmental Studies 2
European History	8	E: 1 course	none
French Language and Culture With score of 3	8	nono	French 1-3
With score of 4	8	none none	French 1-4
With score of 5	8	none	French 1-5
German Language and Culture	O	Hone	Trendit 1 3
With score of 3	8	none	German 1-3
With score of 4	8	none	German 1-4
With score of 5	8	none	German 1-5
Human Geography	4	D: 1 course	Geography 5
Italian Language and Culture			
With score of 3	8	none	Italian 1-3
With score of 4	8	none	Italian 1-5
With score of 5	8	none	Italian 1-6
Japanese Language & Culture	0		Con department for level placement
With score of 3 With score of 4	8 8	none none	See department for level placement
With score of 5	8	none	
Latin	8	none	Latin 1-3
Macroeconomics	4	D: 1 course	none
Microeconomics	4	D: 1 course	none
Music Theory	8	F: 1 course	Music 11
*Physics 1 (effective S'15)	8	none	none
*Physics 2 (effective S'15)	8	none	none
*Physics – B (last offered S'14)	8	none	Physics 10
*Physics – C (Mechanics)	4	none	Physics 6A and 6AL
*Physics – C (Electricity and Magnetism)		none	Physics 6B and 6BL
Psychology	4	D: 1 course	Psychology 1
Spanish Language and Culture With score of 3	Q	nono	Spanish 1 3
With score of 3 With score of 4	8 8	none	Spanish 1-3
With score of 4 With score of 5	8	none none	Spanish 1-4 Spanish 1-5
Spanish Literature and Culture	J	HOHE	opanion i o
Spanish Electrical and Culture			

Advanced Placement Exam	Units	General Ed.	UCSB Course Equivalent
with score of 3, 4, or 5	Awarded	Course Credit	(You may not enroll in these courses for credit at UCSB)
With score of 3	8	none	Spanish 1-4
With score of 4	8	none	Spanish 1-5
With score of 5	8	none	Spanish 1-6
Statistics	4	none	Communication 87, PSTAT 5AA-ZZ, Psychology 5
United States Government and Politics	4	AH&I, D: 1 course	Political Science 12
United States History	8	AH&I, D: 1 course	none
World History: Modern	8	E: 1 course	none

^{*} A maximum of 8 units EACH in art studio, English, Mathematics, and Physics is allowed.

Note: Information on this chart is subject to change. For updates go to: http://catalog.ucsb.edu and search "Advanced Placement Credit and Chart."

A Level Examination Credit

Students who earn grades of A, B, or C on UC-approved GCE and Hong Kong A Level examinations will receive 12 units of credit toward graduation at UCSB for each exam, provided that official grades are submitted to the Office of Admissions. Any general education credit or UCSB course equivalents listed in the chart below will be awarded only for Cambridge International A Level exams taken in 2013 or later, not for exams administered by any other agency. (Student may petition for GE or course credit for Cambridge International exams taken prior to 2013 or for exams administered by other agencies.)

Students should be advised that college courses taken before or after attending UC may duplicate AP, IB and/or A Level examinations. Additionally, exams may duplicate each other (for example, an AP or IB exam in the same subject area). If the student does duplicate an exam with another exam of the same subject content, and/or an exam with a college course, we will award credit only once.

A Level Exam With A Grade of A, B, or C	Units Awarded	General Ed. Credit	UCSB Course Equivalent -
Accounting	12		(You may not enroll in these courses for credit at UCSB)
Accounting Afrikaans	12		Economics 3A, 3B
Arrabic	12		
Art and Design	12		
Biology	12		
Chemistry	12		
Chinese	12		
Classical Studies	12		
Computer Science (effective 2020 only)	12		Computer Science 16
Computer Science (enective 2020 0111y) Computer Science (beginning 2021)	12		Computer Science 8
Computing	12		Computer Science 16
Economics	12	Area D: 2 courses	Economics 1, 2
English – Language	12	71100 512 0001303	200110111103 1, 2
English – Literature	12		
French	12		
Geography	12		
German	12		
Hindi	12		
History	12		
Marathi	12		
Marine Science	12		
Mathematics (effective 2013-2021)	12		Mathematics 2A, 2B, 3A, 3B, 34A, 34B
Mathematics	12		Mathematics 2A, 3A, 34A
(effective beginning 2022)			
Mathematics - Further (effective 2013-201			Mathematics 4A
Mathematics - Further (effective 2020-202			Mathematics 4A, 4B
Mathematics – Further	12		Mathematics 2B, 3B, 34B, 4A
(effective beginning 2022)			
Music	12		
Physics	12		Physics 6A, 6AL, 6B, 6BL, 6C, 6CL
Portuguese	12		
Psychology	12	Area D: 1 course	Psychology 1, 3, 7
Putonghua	12		
Sociology	12		
<u>S</u> panish	12		
Tamil	12		
Telugu	12		
Urdu Hali Baliata a ad	12		
Urdu – Pakistan only	12		

^{+ 8} units effective Spring 2018. Computer Science A exam is 2 units through Spring 2017.

International Baccalaureate Higher Level Examinations

Students who earn scores of 5, 6, or 7 on International Baccalaureate (IB) Higher Level (HL) Examinations taken before high school graduation will receive 8 units of credit toward graduation at UCSB for each such test completed with the required scores, provided official scores are submitted to the Office of Admissions. Students who complete the IB diploma with a score of 30 or above will receive 6 quarter units in addition to the units earned for individual Higher Level exams. The university does not grant credit for Standard Level (SL) exams. The application of this credit to the General Education requirements and course equivalents for these exams are listed below.

Students should be advised that college courses taken before or after attending UC may duplicate AP, IB and/or A Level examinations. Additionally, exams may duplicate each other (for example, an AP or IB exam in the same subject area). If the student does duplicate an exam with another exam of the same subject content, and/or an exam with a college course, we will award credit only once.

INTERNATIONAL BACCALAUREATE INFORMATION

Exam with score of 5, 6, Or 7	Jnits	COE GE Credit	UCSB Equivalent Course(s)
Biology	8	none	EEMB 22, MCDB 20
Business Management	8	none	none
Chemistry	8	none	none
Computer Science	8	none	Computer Science 8
Dance	8	none	none
Economics	8	D: 2 courses	Economics 1, 2
English A: Literature or			
English A: Language And Literature			
Score Of 5	8	Entry Level Writing	Writing 1, 1E
Score Of 6	8	A1	Writing 1, 1E, 2, 2E, 2LK
Score Of 7	8	A1, A2,	Writing 1, 1E, 2, 2E, 2LK, 50, 50E
English B	8	none	none
Film	8	none	none
Geography	8	D: 1 course	none
Global Politics	8	D: 1 course	none
History	8	E: 1 course^	none
History of Africa	8	D: 1 course+	none
History of the Americas	8	D: 1 course	none
History of Asia And Oceania	8	D: 1 course	none
History of Europe and the Middle East	t 8	D: 1 course^	none
Languages Other Than English	8	none	See department for level placement
Mathematics, Analysis and Approache	es 8	none	Mathematics 2A, 3A, 34A or equivalent
(S21 only)			·
Mathematics, Analysis & Approaches (beginning S22)	8	none	Mathematics 2A, 2B, 3A, 3B, 34A, 34B, or equivalent
Mathematics (last offered F20)	8	none	Mathematics 2A, 2B, 3A, 3B, 34A, 34B, or equivalent
Mathematics, Further	8	none	none
(last offered S20)			
Music	8	F: 1 course	none
Philosophy	8	E: 1 course	none
Physics	8	none	Physics 10
Psychology	8	D: 1 course	none
Social & Cultural Anthropology	8	D: 1 course	Anthropology 2
Theater	8	F: 1 course	none
Visual Arts	8	F: 1 course	none

[^] Course also satisfies the European Traditions requirement.

NOTE: UC will not award credit for the IB HL Mathematics: Applications and Interpretations exam.

⁺ Course also satisfies the World Cultures requirement.

General University Requirements

UC Entry Level Writing Requirement

All students entering the University of California must demonstrate an ability to write effectively by fulfilling the Entry Level Writing requirement. The requirement may be met in one of the following ways prior to admission:

- score of 680 or higher on the SAT Writing exam;
- score of 30 or higher on the ACT Combined English Language Arts (ELA) exam;
- 3. score of 3 or higher on the College Board Advanced Placement Examination in English Composition and Literature or English Language and Composition;
- 4. score of 5, 6, or 7 on the higher level English A International Baccalaureate Examination;
- 5. score of 6 or 7 on the standard level English A1 International Baccalaureate Examination;
- passing the University of California systemwide Analytical Writing Placement Exam. UCSB will only accept AWPE results from students transferring from another UC Campus;
- 7. placing in Writing 2 via UCSB's Collaborative Writing Placement Exam (CWP), see below;
- 8. by earning a grade of C or higher in a transfer course satisfying GE Area A1.

Students who have not met the UC Entry Level Writing Requirement in one of the ways listed above will be required to take a placement exam.

Students who do not achieve an appropriate score on the placement exam to fulfill the Entry Level Writing Requirement must enroll in Writing 1, 1E, or Linguistics 12 within their first year at UCSB.

Visit the Writing Program's website (writing.ucsb.edu/academics) for placement exam information.

American History and Institutions Requirement

The American History and Institutions requirement is based on the principle that American students enrolled at an American university should have some knowledge of the history and government of their country. You may meet this requirement in any one of the following ways:

- by achieving a score of 3 or higher on the College Board Advanced Placement Examination in African American Studies, United States Government and Politics, and United States History, or
- 2. by passing a non-credit examination in American history or American institutions, offered in the Department of History during the first week of each quarter. Consult the department for further information; or
- by achieving a score of 650 or higher on SAT II: Subject Test in American History; or
- 4. by completing one four-unit course from the following list of courses:

Anthropology 131 Art History 121A-B-C-E, 136H Asian American Studies 1, 2 Black Studies 1, 6, 103, 137E, 169BR-CR

Chicano Studies 1A-B-C, 144, 168A-B, 174, 188C

Comparative Literature 133 English 133AA-ZZ, 134AA-ZZ, 137A-B, 191

Environmental Studies 173
Feminist Studies 155A, 159B-C
History 11A, 17A-B-C, 17AH-BH-CH, 105A, 142AL-S, 159B-C, 160A-B, 161A-B, 164C, 164IA-IB, 165, 166A-B-C-D-LB, 168A-B-C-D-N-M, 169M, 172A-B, 173T, 175A-B, 176A-B, 177, 178A-B, 179A-B

Military Science 27 Political Science 12, 115, 127, 151, 152 153, 155, 157, 158, 162, 165, 180,

Religious Studies 7, 14, 151A-B, 152 Sociology 144, 155A Theater 180A-B

Courses used to fulfill the American History and Institutions requirement may also be applied to General Education or major requirements, or both where appropriate. Equivalent courses taken at other accredited colleges or universities, or in summer session may be acceptable. Students who transfer to UCSB from another campus of the University of California where the American History and Institutions Requirement has been considered satisfied will automatically fulfill the requirement at UCSB.

International students on a nonimmigrant visa may petition for a waiver of this requirement.

College of Engineering General Education Requirements

The aims of the General Education Program in the College of Engineering are to provide a body of knowledge of general intellectual value that will give the student a broad cultural base and to meet the objectives of the engineering profession. An appreciation and understanding of the humanities and social sciences are important in making engineers aware of their social responsibilities and enabling them to consider related factors in the decision-making process.

Students in the College of Engineering must complete the General Education requirements in order to qualify for graduation. Students are reminded that other degree requirements exist and that they are responsible for familiarizing themselves with all bachelor's degree requirements. Please see the GOLD system for General Education courses offered during a particular quarter.

It should be noted that for College of Engineering transfers who completed IGETC (Intersegmental General Education Transfer Curriculum), it may be used to substitute for entire UCSB College of Engineering General Education pattern (IGETC does not satisfy the American History and Institutions requirement).

Students who have questions about the General Education requirements should consult with the advisors in College of Engineering Office of Undergraduate Studies.

GENERAL SUBJECT AREA REQUIREMENTS

A total of 8 courses are required to satisfy the General Education requirements of the College of Engineering. All students must follow the pattern of distribution shown below:

I. Area A: English Reading and Composition

The Area A requirement consists of two parts, Area A-1 and A-2. Two courses must be completed in this area and taken for letter grades. Writing 2 or 2E, and one course from Writing 50, 50E, 105CD, 105CW, 105M, 105PD, 105PS, 105S, 105SW, 107B, 107EP, 107G, 107J, 107L, 107M, 107T, 107WC, 109ED, 109ES, 109HP, or 109ST are required.

Chemical Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering majors are strongly encouraged to take Writing 2E and 50E in their first year at UCSB. Computer Science majors may take Writing 2E and 50E space permitting.

NOTE: Students must complete the UC Entry Level Writing Requirement before enrolling in courses that fulfill the Area A requirement of the General Education program. Please refer to page 11 of this publication or the UCSB General Catalog for a list of ways to satisfy the UC Entry Level Writing requirement.

II. Areas D, E, F, & G

At least 6 courses must be completed in these areas.

1. Area D: Social Sciences. A minimum of 2 courses must be completed in Area D. Objective: To apply perspectives, theories, and methods of social science research to understand what motivates, influences, and/or determines the behaviors of individuals, groups, and societies. Area D courses are based upon systematic studies of human behavior, which may include observation, experimentation, deductive reasoning, and quantitative analysis.

2. Area E: Culture and Thought.

A minimum of 2 courses must be completed in Area E. <u>Objective</u>: To use specific methods and frameworks to develop perspectives and abilities that enable the study of culture and thought within specific contexts, and to recognize the role of human agency in defining, maintaining, and adapting cultures.

- 3. Area F: The Arts. A minimum of 1 course must be completed in Area F. <u>Objective</u>: To develop an appreciation of fine and performing arts, popular arts, and visual culture and to express relationships between arts and historical or cultural
- 4. Area G: Literature. A minimum of 1 course must be completed in Area G. Objective: To learn to analyze texts using methods appropriate to literary study and to situate analysis within contexts where texts circulate.

SPECIAL SUBJECT AREA REQUIREMENTS

In the process of fulfilling the General Education General Subject Areas D through G requirements, students must complete the following Special Subject Area requirements:

1. Writing Requirement. Objective: To study and practice with writing, reading, and critical analysis within specific disciplines. Students will demonstrate abilities by producing written work totaling at least 1,800 words that is independent of or in addition to written examinations. Assessment of written work must be a significant consideration in total assessment of student performance in the course. At least four designated General Education courses that meet the following criteria: (1) the courses require one to three papers totaling at least 1,800 words, exclusive of elements such as footnotes, equations, tables of contents, or references; (2) the required papers are independent of or in addition to written examinations; and (3) the paper(s) is a significant consideration in the assessment of student performance in the course. The writing requirement may be met only with designated UCSB courses approved by the Academic Senate.

NOTES: ENGR 101 may be used as a writing requirement class, even by those students for whom ENGR 101 is required.

New transfer students should consult with the College Undergraduate Studies Office regarding this requirement.

 Ethnicity Requirement. Objective: To learn to identify and understand the philosophical, intellectual, historical, and/or cultural experiences of historically oppressed and excluded racial minorities in the United States. At least one course in this area is required.

3. European Traditions or World Cultures Requirement.

European Traditions Objective: To learn to analyze early and/or modern European cultures and their significance in world affairs.

World Cultures objective: To learn to identify, understand, and appreciate the history, thought, and practices of

one or more culutres outside of the European Tradition.

At least one course from either of these areas (European Traditions or World Cultures) is required.

Other Regulations:

- A course listed in more than one general subject area can be applied to only one of these areas. (Example: Art History 6A cannot be applied to both Areas E and F.) However, a course can be applied towards a single general subject area and any special subject areas which that course fulfills. (Example: Asian American Studies 4 can be applied to the Writing and Ethnicity requirements in addition to the Area F requirement.)
- Some courses taken to satisfy the General Education requirements may also be applied simultaneously to the American History and Institutions requirement. Such courses must be on the list of approved General Education courses and on the list of approved American History and Institutions courses.
- Courses taken to fulfill a General Education requirement may be taken on a P/NP basis, if the course is offered with that grading option (refer to GOLD for the grading option for a particular course).

CHECKLIST OF GENERAL UNIVERSITY AND GENERAL EDUCATION REQUIREMENTS

b.	Ethnicity Req	quirement – (1 course)		
a.	Writing Requ	irement – (4 courses)		
In t			a requiremen	ts, students must fulfill the following Special Subject Area
5.	Area G: Liter	rature (1 course minimum)		
4.	Area F: The A	Arts (1 course minimum)		
3.	Area E: Cultu	ure and Thought (2 courses mi	nimum)	
2.	Area D: Socia	al Sciences (2 courses minimum))	
	A-1: Writing 2	or 2E and A-2 : Writing 50, 50E, 107G, 107J, 107L, 107M,	, 107T, 107'	CCW, 105M, 105PD, 105PS, 105S, 105SW, 107B, 107E WC, 109ED, 109ES, 109HP, or 109ST A-2:
	neral Subject A Area A: Engl	Areas ish Reading and Composition		
A c		CATION REQUIREMENTS ore than one General Subject Area	can be appli	ed to only one area. Course total in Areas D, E, F, and G m
		or Advanced Placement _apply to the General Education require		or International waiver opriate.
An	nerican History	and Institutions* – (Refer to page	ge 11 for the	list of acceptable courses.)
Pas	ssed Exam	or Writing 1, 1E or Ling 1	2	or transferred appropriate course

Only courses approved by the Academic Senate can be used to fulfill these requirements.

CHEMICAL ENGINEERING 2025-26

Units

		Units	I	
PREPARATIO	N FOR THE MAJOR	75	UNIVERSITY REQUIREM	ENTS
CH E 10 CHEM 3A, 3B,	3C or 1A, 1B, 1C			quirement: English Composition ee quarters of matriculation
CHEM 109A o ENGR 3 MATH 3A-B, 4	r 130A, 109B or 130B . A or 4AI, 4B or 4BI, 6A 7C, 7L			tutions – (one 4-unit course, selected from approved list)
гптэ /А, /Б, /	/C, /L		GENERAL EDUCATION	
CH E 110A-B CH E 118 CH E 120A-B-C CH E 128 CH E 132A-B-C CH E 140A-B CH E 152A CH E 180A-B CH E 184A-B CHEM 113B-C MATRL 101 or *^ see note on ne Technical Elect Prior approval of	C		General Subject Areas Area A: English Reading required) A-1: Area D: Social Science (2 courses minimum) Area E: Culture and Thoug (2 courses minimum) Area F: The Arts (1 course minimum)	& Comprehension – (2 courses A-2:
At least 9 of the in the College o	15 units must be in the for of Engineering: CH E, ECE hnical Elective Requirer	ollowing departments , MATRL, ME	Special Subject Areas	
CH E 102 CH E 121 CH E 124 CH E 125 CH E 126 CH E 141 CH E 146 CH E 152B CH E 154 CH E 160 CH E 160 CH E 171 CH E 173 CH E 173 CH E 174 CH E 1961	CHEM 109C CHEM 115A,B,C CHEM 123 CHEM 126 CHEM 146 CHEM 145 CHEM 147 CHEM 150 ECE 130A,B,C ECE 183 ENGR 101 ENGR 103 ENV \$ 105 MATH 122A,B MATRL 100A,B	MATRL 160 MATRL 185 MCDB 101A,B MCDB 111 MCDB 126A,B,C MCDB 133 MCDB 138 ME 110 ME 112 ME 112 ME 128 ME 128 ME 134 ME 169 ME 185 PHYS 123A,B PHYS 127AL	European Traditions	
CH E 198¹ ¹Three units maximu with GPA of 3.0 or hi Technical elec	MATRL 135 Im from CH E 196 and CH E 198 Igher.	PHYS 127BL combined; only for students		
	r requirements, courses tal t of Electrical and Comput		TOTAL UNITS REQUIRED	FOR GRADUATION18

the Department of Electrical and Computer Engineering, must

be taken for a letter grade.

TOTAL UNITS REQUIRED FOR GRADUATION......187

CHEMICAL ENGINEERING 2025-26

This grid is intended to serve as a guide and should be adjusted for individual circumstances in consultation with academic advisors.

Course availability subject to change. Changes will be announced by the department.

FRESHMAN YEAR

FALL	units	WINTER	units	SPRING	units
CH E 5	3	CHEM 3B or 1B	3	CHEM 3C or 1C	3
CHEM 3A or 1A	4	CHEM 2AL	2.5	CHEM 2BL	2.5
MATH 3A	4	MATH 3B	4	ENGR 3	3
WRIT 1E or 2E ⁺	4	PHYS 7A	4	MATH 4A or 4AI	4
		WRIT 2E or 50E+	4	PHYS 7B	4
TOTAL	15		17.5		16.5

SOPHOMORE YEAR

FALL	units	WINTER	units	SPRING	units
CH E 10	3	CH E 107	3	CH E 110B	3
CHEM 109A or 130A	4	CH E 110A	3	CH E 132A	4
MATH 4B or 4BI	4	CHEM 6AL	3	CHEM 6BL	3
PHYS 7L	1	CHEM 109B or 130B	4	MATH 6B	4
PHYS 7C	4	MATH 6A or 6AI	4	G.E.	4
TOTAL	16		17		12

JUNIOR YEAR

FALL	units	WINTER	units	SPRING	units
CH E 120A	4	CH E 120B	3	CH E 118	1
CH E 128	3	CH E 132C	3	CH E 120C	3
CH E 132B	3	CHEM 113B	4	CH E 140A	3
G.E.	4	MATRL 101*^	3	CH E 180A	3
		Technical Elective	3	CHEM 113C	4
				Technical Elective	3
TOTAL	14		16		17

SENIOR YEAR

FALL	units	WINTER	units	SPRING	units
CH E 140B	3	CH E 180B	3	CH E 184B	3
CH E 152A	4	CH E 184A	3	G.E.	8
G.E.	4	G.E.	4	Technical Elective	3
Technical Elective	3	Technical Elective	3		
TOTAL	14		13		14

⁺ ELWR may also be satisfied by LING 12 or WRIT 1. Area A1 may also be satisfied by WRIT 2. Area A2 may also be satisfied by courses listed on page 11.

^{*} If applying to the BS/MS Materials program, third year students must take the MATRL 100A in Fall, MATRL 100B in Winter, and MATRL 100C in Spring.

[^]Students may only count one course toward the major. (MATRL 101 OR MATRL 100C)

COMPUTER ENGINEERING 2025-26

Un<u>its</u>

PREPARATION FO	R THE MAJOR	_	UNIVERSITY REQUIREME	ENTS
CMPSC 24 CMPSC 32		4		quirement: English Composition ee quarters of matriculation
ECE 1A-1B ECE 5 ECE 10A, 10AL, 10 ECE 15A	B, 10BL, 10C, 10CL. B, 4A-B, 6A			tutions – (one 4-unit course, selected from approved list)
	D, 7L		GENERAL EDUCATION	
UPPER DIVISION	MAJOR	68	General Subject Areas	
ECE 139 or PSTAT ECE 152A ECE 154A ENGR 101	120A		Area A: English Reading required) A-1: Area D: Social Science (2 courses minimum)	& Comprehension – (2 courses
*Prerequisite to ECE 18 Computer Enginee from the following	9A is ECE 153B (offered twring electives selecte list:	d 36-40	Area E: Culture and Thoug (2 courses minimum)	ht
Must include at leas	st <u>2</u> sequences. See E st of approved seque		Area F: The Arts (1 course minimum)	Area G: Literature (1 course minimum)
CMPSC 130B CMPSC 138 CMPSC 153A/ ECE 153A CMPSC 156 CMPSC 160 CMPSC 162 CMPSC 165A-B CMPSC 170 CMPSC 171 CMPSC 171 CMPSC 174A CMPSC 176A-B-C CMPSC 177 CMPSC 177	CMPSC 181/ ECE 181 ECE 122A-B ECE 123 ECE 130A-B-C ECE 133 ECE 147A-B ECE 149 ECE 150 ECE 152B ECE 153B ECE 154B ECE 157A-B-C ECE 160	ECE 178 ECE 179D, 179P ECE 180 ECE 184 ECE 186 ECE 194AA- 194ZZ (except 194R) ECE 192 or 196/CMPSC 192 or 196 (4 units combined	Special Subject Areas Ethnicity (1 course): European Traditions or World Cultures (1 course) Writing (4 courses required)	e): l):
	ring electives taken:_		NON-MAJOR ELECTIVES Free Electives taken:	<u> </u>
	irements, courses taken ectrical and Computer E grade.		TOTAL UNITS REQUIRED	FOR GRADUATION191

COMPUTER ENGINEERING 2025-26

This grid is intended to serve as a guide and should be adjusted for individual circumstances in consultation with academic advisors.

Course availability subject to change. Changes will be announced by the department.

FRESHMAN YEAR

FALL	units	WINTER	units	SPRING	units
ECE 3 or CMPSC 8	4	CMPSC 16	4	CMPSC 24	4
ECE 5 ¹	4	ECE 1A	1	ECE 1B	1
MATH 3A	4	MATH 3B	4	MATH 4A	4
WRIT 1E or 2E ²	4	PHYS 7A	4	PHYS 7B	4
		WRIT 2E or 50E ²	4	WRIT 50E or G.E. ²	4
TOTAL	16		17		17

SOPHOMORE YEAR

FALL	units	WINTER	units	SPRING	units
ECE 10A	3	ECE 10B	3	ECE 10C	3
ECE 10AL	2	ECE 10BL	2	ECE 10CL	2
MATH 4B	4	ECE 15A	4	ECE 139 or PSTAT 120A4	4
CMPSC 32	4	PHYS 7D	3	ECE 152A	5
PHYS 7C	4	MATH 6A	4	CMPSC 40	5
		PHYS 7L ³	1		
TOTAL	17		17		19

JUNIOR YEAR

FALL	units	WINTER	units	SPRING	units
ECE 154A	4	CMPSC 130A	4	CMPEN Electives	8
CMPEN Electives	8	CMPEN Electives	8	G.E.	8
G.E.	4	G.E.	4		
TOTAL	16		16		16

SENIOR YEAR

FALL	units	WINTER	units	SPRING	units
ECE 189A ⁵ / CMPSC 189A ⁶	4	ECE 189B/ CMPSC 189B	4	ECE 189C or CMPEN Elective	e 4
CMPEN Electives	8	ENGR 101 ⁷	3	CMPEN Elective	4
G.E.	4	CMPEN Elective	4	G.E.	4
		G.E.	4		
TOTAL	16		15		12

¹ ECE 5 is also offered in winter quarter.

² ELWR may also be satisfied by LING 12 or WRIT 1. Area A1 may also be satisfied by WRIT 2. Area A2 may also be satisfied by courses listed on page 11.

³ PHYS 7L may be taken concurrently with PHYS 7C or after taking PHYS 7C.

⁴ PSTAT 120A is offered each quarter. ECE 139 is offered only in the spring quarter and is better suited for future upper division electives for the Computer Engineering major.

⁵ ECE 153B is the prerequisite to ECE 189A.

⁶ CMPSC 156 is the prerequisite for CMPSC 189A.

⁷ ENGR 101 may be taken any quarter of the senior year.

COMPUTER SCIENCE 2025-26

Units PREPARATION FOR THE MAJOR **UNIVERSITY REQUIREMENTS** 45 CMPSC 16..... 4 UC Entry Level Writing Requirement: English Composition Must be fulfilled within three quarters of matriculation CMPSC 64..... 4 American History and Institutions – (one 4-unit course, may be counted as G.E. if selected from approved list) PSTAT 120A..... 4 **UPPER DIVISION MAJOR GENERAL EDUCATION General Subject Areas** Area A: English Reading & Comprehension - (2 courses required) 14 courses selected from the following list (at least 7 courses must be CMPSC courses). A-1: _____ A-2: ____ CMPSC 172 CMPSC 196B² CMPSC 110 CMPSC 111 CMPSC 174A-B ECE 130A-B-C Area D: Social Science CMPSC 176A-B-C **ECE 152A** CMPSC 132 (2 courses minimum) CMPSC 134 CMPSC 177 **ECE 153B** CMPSC 138 CMPSC 178 **ECE 160** CMPSC 140 CMPSC 180 **ECE 178** Area E: Culture and Thought CMPSC 148 CMPSC/ECE 181 MATH 108A-B (2 courses minimum) CMPSC/ECE 153A CMPSC 184 **MATH 119A-B** CMPSC 154 CMPSC 185 MATH 124A-B CMPSC 156 CMPSC 186 PSTAT 120B CMPSC 160 CMPSC 188 PSTAT 122 Area F: The Arts Area G: Literature PSTAT 130 CMPSC 162 CMPSC 189 A-B (1 course minimum) (1 course minimum) CMPSC 165A-B CMPSC 190 AA-ZZ PSTAT 160A-B CMPSC 170 CMPSC 1921 CMPSC 171 CMPSC 1961 **Special Subject Areas** ¹ Four units maximum from CMPSC 192 and 196 combined; only for students with GPA of 3.0 or higher. Ethnicity (1 course):__ ² Only for students who have met the requirements. Please see department advisor for more information. **European Traditions** Major Field Electives taken: or World Cultures (1 course):____ Writing (4 courses required): **NON-MAJOR ELECTIVES** Free Electives taken: **SCIENCE COURSES (See dept. for approved lists)** Science Electives taken:

To satisfy major requirements, courses taken inside or outside

letter grade.

the Department of Computer Science, must be taken for a TOTAL UNITS REQUIRED FOR GRADUATION......180

COMPUTER SCIENCE 2025-26

This grid is intended to serve as a guide and should be adjusted for individual circumstances in consultation with academic advisors.

Course availability subject to change. Changes will be announced by the department.

FRESHMAN YEAR

FALL	units	WINTER	units	SPRING	units
G.E. or CMPSC 8 ¹	4	CMPSC 16 ¹	4	CMPSC 24	4
MATH 3A	4	MATH 3B	4	MATH 4A	4
G.E.	4	Science Elective	4	Science Elective	4
G.E.	4	G.E.	4	Science or Free Elective	4
TOTAL	16		16		16

SOPHOMORE YEAR

FALL	units	WINTER	units	SPRING	units
CMPSC 32	4	CMPSC 64	4	CMPSC 130B	4
CMPSC 40	5	MATH 4B	4	MATH 6A	4
PSTAT 120A	4	G.E.	4	G.E.	4
Science Elective	4	CMPSC 130A	4	Science or Free Elective	4
TOTAL	17		16		16

JUNIOR YEAR

FALL	units	WINTER	units	SPRING	units
Field Elective	4	G.E.	4	Field Elective	4
Field Elective	4	Field Elective	4	Field Elective	4
Field Elective	4	Field Elective	4	G.E.	4
Science or Free Elective	4	G.E.	4		
TOTAL	16		16		12

SENIOR YEAR

FALL	units	WINTER	units	SPRING	units
Field Elective	4	Field Elective	4	Field Elective	4
Field Elective	4	Field Elective	4	Field Elective	4
Field Elective	4	ENGR 101 ²	3	G.E. or Free Elective	4
		Free Elective	4		
TOTAL	12		15		12

Consult Computer Science academic advisor for placement information.
 ENGR 101 may be taken any quarter of senior year.

ELECTRICAL ENGINEERING 2025-26

Units UNIVERSITY REQUIREMENTS PREPARATION FOR THE MAJOR UC Entry Level Writing Requirement: English Composition Must be fulfilled within three quarters of matriculation ECE 10A, 10AL, 10B, 10BL, 10C, 10CL 15 American History and Institutions – (one 4-unit course, ECE 15A..... 4 may be counted as G.E. if selected from approved list) MATH 2A-B or 3A-B, 4A-B, 6A-B 24 **GENERAL EDUCATION General Subject Areas UPPER DIVISION MAJOR** Area A: English Reading & Comprehension - (2 courses required) _A-2: ____ A-1: ENGR 101..... 3 Area D: Social Science Departmental electives selected from (2 courses minimum) *If both ECE 153A and ECE 153B are taken, one may be used as a Area E: Culture and Thought departmental elective and the other will be used as a required course. (2 courses minimum) Approval of the student's departmental electives must be obtained from the student's faculty adviser. The departmental electives must include an approved depth sequence corresponding to the students' chosen track, Area F: The Arts Area G: Literature or another depth sequence of at least 4 courses that is approved by the (1 course minimum) (1 course minimum) students' faculty advisor. See the ECE Department Student Office for the list of courses in the different areas of specialization. Approved Departmental Electives: **Special Subject Areas** ECE 120A-B ECE 146A-B ECE 181 ECE 122A-B ECE 147A-B-C FCF 183 Ethnicity (1 course):_____ ECE 123 ECE 148 ECE 184 **ECE 125** ECE 149 ECE 186 **European Traditions ECE 130C** ECE 152B ECE 192 or 196 (4 units or World Cultures (1 course):___ ECE 132 ECE 153A-B* combined max) ECE 133 ECE 154A-B ECE 194 AA-ZZ Writing (4 courses required): (excluding ECE 194R) ECE 135 ECE 157A-B-C MATRL 100A, C ECE 136A-B-C ECE 158 MATRL 100B or MATRL ECE 137A-B ECE 160 101 ECE 141A-B ECE 162A-B-C MATRL 162A-B ECE 142 FCF 178 TMP 120, 122 (1 course FCF 144 ECE 179D, P ECE 145A-B-C ECE 180 **NON-MAJOR ELECTIVES** Departmental Electives taken: Free Electives taken:

To satisfy major requirements, courses taken inside or outside the Department of Electrical and Computer Engineering, must be taken for a letter grade.

TOTAL UNITS REQUIRED FOR GRADUATION.....189

ELECTRICAL ENGINEERING 2025-26

This grid is intended to serve as a guide and should be adjusted for individual circumstances in consultation with academic advisors.

Course availability subject to change. Changes will be announced by the department.

FRESHMAN YEAR

FALL	units	WINTER	units	SPRING	units	
ECE 3	4	CMPSC 16 or CMPSC 9	4	ECE 6 or CHEM 1A ³	4	
ECE 5 ¹	4	MATH 3B	4	MATH 4A	4	
MATH 3A	4	PHYS 7A	4	PHYS 7B	4	
WRIT 1E or 2E ²	4	WRIT 2E or 50E ²	4	WRIT 50E or G.E. ²	4	
TOTAL	16		16		16	

SOPHOMORE YEAR

FALL	units	WINTER	units	SPRING	units
ECE 10A	3	ECE 10B	3	ECE 10C	3
ECE 10AL	2	ECE 10BL	2	ECE 10CL	2
MATH 4B	4	ECE 130A	4	ECE 130B	4
PHYS 7C	4	MATH 6A	4	ECE 139	4
PHYS 7L⁴	1	PHYS 7D	3	MATH 6B	4
TOTAL	14		16		17

JUNIOR YEAR

FALL	units	WINTER	units	SPRING	units
ECE 15A	4	ECE 152A	5	ECE 153B or ECE Elective	4
ECE 134	4	ECE Elective	4	ECE Elective	4
ECE Elective	4	ECE Elective	4	ECE Elective	4
G.E.	4	G.E.	4	G.E.	4
TOTAL	16		17		16

SENIOR YEAR

FALL	units	WINTER	units	SPRING	units
ECE 153A or ECE Elective	4	ECE 188B	4	ECE 188C	4
ECE 188A ⁵	4	ECE Elective	4	ECE Elective	4
G.E.	4	ECE Elective	4	ENGR 1017	3
Free Elective ⁶	4	G.E.	4	G.E.	4
TOTAL	16		16		15

¹ ECE 5 is also offered in winter quarter.

² ELWR may also be satisfied by LING 12 or WRIT 1. Area A1 may also be satisfied by WRIT 2. Area A2 may also be satisfied by courses listed on page 11.

³ Students interested in the BS/MS Materials Program are advised to take CHEM 1A.

⁴ PHYS 7L may be taken concurrently with PHYS 7C.

⁵ ECE 153A or ECE 153B is the prerequisite for ECE 188A. ECE 153A may be taken concurrently with ECE 188A.

⁶ Students must complete at least 189 units to graduate. See an advisor for more information.

⁷ ENGR 101 may be taken any quarter of senior year.

for a letter grade.

MECHANICAL ENGINEERING 2025-26

		Units	1			
PREPARATION FOR THE MAJOR 76.5		UNIVERSITY REQUIREMENTS				
CHEM 1A, 2AL, 1B ENGR 3			UC Entry Level Writing Requirement: English Composition Must be fulfilled within three quarters of matriculation			
MATH 3A-B, 4A-B, ME 6	6A-B	24	Satisfied by:	•		
ME 10						
ME 12S ME 14		1	American History and Instituti may be counted as G.E. if seld			
ME 15						
ME 16			CENTERAL EDUCATION			
ME 17			GENERAL EDUCATION			
PHYS 7A, 7B, 7C, 7	D, 7L	16				
LIDDED DIVIGIONI	144 100		General Subject Areas	Comprohension (2		
UPPER DIVISION	MAJOR	69	Area A: English Reading & required)	Comprehension – (2 courses		
Third Year			required)			
MATRL 101 or MAT			A-1:	A-2:		
ME 103						
ME 104			Area D: Social Science			
ME 107			(2 courses minimum)			
ME 108		-	<u> </u>			
ME 151A-B						
ME 152A			Area E: Culture and Thought			
ME 153			(2 courses minimum)			
1 Specialization Gro *Two courses required: Eithe	oup*					
	Group 3 Group 4					
L1 BIO E 120A ME 163	ME 127 ME 141A	ME 166 ME 152B	Area F: The Arts	Area G: Literature		
L2 BIO E 120B ME 155A	ME 129 ME 141B	ME 154 ME 151C	(1 course minimum)	(1 course minimum)		
Fourth Year		1				
ME 105 ME 154 or 157 or 1						
ME 154 OF 157 OF 1			Special Subject Areas			
ME 189A-B-C			1			
Engineering Electiv			Ethnicity (1 course):			
•			European Traditions			
Prior approval of the stu from the student's facult		lectives must be obtained	or World Cultures (1 course):_			
may change from year to	o year and that not all	courses are offered each				
year.	-		Writing (4 courses required):			
Approved Engineer	ring Electives:					
BIOE 120A-B	ME 124	ME 158				
CHEM 109A	ME 125 AA-ZZ	ME 159		·		
CHEM 123 ECE 147A,C	ME 127 ME 128	ME 162 ME 166				
CMPSC/ECE 181B	ME 129	ME 167	NON-MAJOR ELECTIVES			
ENGR 101 ENGR 195A-B-C	ME 133 ME 134	ME W167 ¹ ME 169	- ITOIT-INAJOR ELECTIVES			
ENV S 105	ME 135	ME 179D-L-P	Free Electives taken:			
MATRL 100A MATRL 100B	ME 140A-B ME 141A-B	ME 180 ME 185				
MATRL 186A-B	ME 146	ME 186A-B				
MATRL 188 ME 102	ME 147 ME 154	ME 197 ² ME 199 ²				
ME 110	ME 155B-C	TMP 120, 122 ³				
ME 112	ME 157					
¹ ME W167 online version of ² Four units maximum from I		oined				
³ Max of 1 TMP course may		Jinou.				

To satisfy major requirements, courses taken inside or outside the Department of Mechanical Engineering, must be taken

MECHANICAL ENGINEERING 2025-26

This grid is intended to serve as a guide and should be adjusted for individual circumstances in consultation with academic advisors.

Course availability subject to change. Changes will be announced by the department.

FRESHMAN YEAR

FALL	units	WINTER	units	SPRING	units
CHEM 1A or 2A	4	CHEM 1B or 2B	3	MATH 4A	4
MATH 3A	4	CHEM 2AL	2.5	ME 10	4
ME 12S ¹	1	MATH 3B	4	ENGR 3	3
WRIT 1E or 2E ²	4	PHYS 7A	4	PHYS 7B	4
		WRIT 2E or 50E ²	4	WRIT 50E or G.E. ²	4
TOTAL	13		17.5		19

SOPHOMORE YEAR

FALL	units	WINTER	units	SPRING	units
MATH 4B	4	MATH 6A	4	MATH 6B	4
ME 14	4	ME 6	4	ME 16	4
ME 17	3	ME 15	4	G.E.	4
PHYS 7C	4	PHYS 7D	3	G.E.	4
		PHYS 7L	1		
TOTAL	15		16		16

JUNIOR YEAR

FALL	units	WINTER	units	SPRING	units
ME 103	4	MATRL 101 ³	3	ME 104	4
ME 107	3	ME 108	3	ME 153	3
ME 151A	4	ME 151B	4	Specialization Course	3
ME 152A	4	Specialization Course	3	Ġ.E.	4
TOTAL	15	•	13		14

SENIOR YEAR

_ . . .

FALL	units	WINTER	units	SPRING	units	
ME 154, ME 157, or ME 167	4 3	ME 156B	3	ME 189C	3	
ME 105	4	ME 189B	3	Departmental Elective	3	
ME 156A	3	Departmental Elective	3	G.È. or Free Electives	8	
ME 189A	3	G.E. or Free Elective	4			
Departmental Elective	3					
TOTAL	16		13		14	

- ¹ ME 12S is offered every Fall, Winter, and Spring quarter. The ME 12S requirement must be finished before the start of the third year.
- ² ELWR may also be satisfied by LING 12 or WRIT 1. Area A1 may also be satisfied by WRIT 2. Area A2 may also be satisfied by courses listed on page 11.
- ³ If applying to the BS/MS Materials program, third year students must take the MATRL 100A in Fall, MATRL 100B in Winter, and MATRL 100C in Spring.
- ⁴ Course availability may vary. If using ME 154, ME 157, or ME 167 to satisfy requirement, students may not count the course as an Engineering Elective. If either of the other courses are also taken, those additional courses will count as an engineering elective.
- ^ Students may only count one course toward the major (MATRL 101 or MATRL 100C).

Additional Resources and Information

Gaucho On-Line Data (GOLD) – grades, class registration, progess checks—https://my.sa.ucsb.edu/gold
UMAIL – campus email for official notifications—http://www.umail.ucsb.edu
Schedule of Classes information – quarterly calendar and information—http://www.registrar.ucsb.edu
General Catalog for UCSB – academic requirements for all campus majors—http://catalog.ucsb.edu
Summer Sessions – Summer programs and course offerings—http://www.summer.ucsb.edu
Tutoring – course-specific tutoring and academic skills development—http://www.clas.ucsb.edu
Education Abroad Program – EAP options for engineering students—email: eap@engineering.ucsb.edu
College Honors Program – program information and opportunities—email: honors@engineering.ucsb.edu

Advising Staff

College Advisors: general education requirements, academic standing, final degree clearance

Departmental Advisors: course selection, class enrollment, change of major, academic requirements

College Advising Staff	Phone (805) 893-2809	Email coe-info@engr.ucsb.edu	Location Harold Frank Hall, Rm. 1006
Departmental Advisors: Chemical Engineering Computer Engineering Computer Science Electrical Engineering Mechanical Engineering Technology Management	893-8671	cheugrads@engr.ucsb.edu	Engr.II, Rm. 3357
	893-8292	ugrad-advisor@ece.ucsb.edu	Trailer 380, Rm. 101
	893-4321	undergrad@cs.ucsb.edu	Harold Frank Hall, Rm. 2104
	893-8292	ugrad-advisor@ece.ucsb.edu	Trailer 380, Rm. 101
	893-8198	meugrad@engr.ucsb.edu	Engr.II, Rm. 2355
	893-2729	advising@tmp.ucsb.edu	Phelps Hall, Rm. 1333

Academic Integrity

The UCSB Student Conduct Code exists to support the highest standards of social and academic behavior and ensure an environment conducive to student learning. It is expected that students attending the UCSB understand and subscribe to the ideal of academic integrity, and are willing to bear individual responsibility for their work. Any submission that fulfills an academic requirement must represent a student's original work. Any act of academic dishonesty will subject a person to University disciplinary action.

Student Conduct Code and Student Due Process: http://regulations.sa.ucsb.edu/home (B. Student Rights: Procedural Due Process).

Instructor Responsibilities and Procedures: https://senate.ucsb.edu/bylaws-and-regulations/ (Section 10, Reg. 90)

Academic dishonesty includes cheating, plagiarism, unauthorized collaboration, furnishing false information, and misuse of course materials. Definitions and misconduct are posted at http://studentconduct.sa.ucsb.edu/academic-integrity.

A specific note about student collaboration: Collaboration on homework assignments (i.e., problem sets), especially in light of the recognized pedagogical benefit of group study, is dictated by standards that can and do vary widely from course to course and instructor to instructor. The use of old solution sets and published solution guides presents a similar situation. Because homework assignments serve two functions – helping students learn the material and helping instructors evaluate academic performance – it is usually not obvious how much collaboration or assistance from commonly-available solutions, if any, the instructor expects. It is therefore imperative that students and instructors play an active role in communicating expectations about the nature and extent of collaboration or assistance from materials that is permissible or encouraged.

Notes

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