



Electrical Engineering

Junior Meeting 2022
WELCOME!



Senior Elective Requirements

- ✓ 8 Courses and 32 units minimum
- ✓ EE Senior Capstone, ECE 188A-B-C is required
 - ECE 188A prerequisite is ECE 130A&B with a C- or better in both; *or* ECE 137A&B with a C- or better in both
- ✓ 1 Dept Approved Sequence
 - ✓ Approx. 4 (minimum 32 units total) single elective courses

Approval Process

- 🌐 Discuss your senior elective plans with your faculty advisor and get course recommendations.
- 🌐 Faculty Advisor must sign and approve your senior elective plans
- 🌐 Email the signed form to ECE Student Office for final approval



Elective Sheets are Contracts

- 🌐 You **MUST** complete the required number of elective courses.
- 🌐 You do not have to list **ALL** electives you plan to take, just the required minimum (8 courses, 32 units minimum).
- 🌐 You are responsible for knowing the prerequisites of the courses.
- 🌐 **PLAN CAREFULLY!!**






2022-2023 EE Faculty Advisor Assignments

Last Name	Faculty Advisor	Faculty Email
A - D	https://www.ece.ucsb.edu/undergrad/current	
E - G	To be announced soon.	
H - J		
K - M		
N - Q		
R - V		
W - Z		

EE SENIOR ELECTIVE FORM



EE Senior Elective Summary

-  Capstone Project: ECE 188 ABC; Include your completed electives!
Run quarterly progress report
-  One (1) Sequence
-  32 units, 8 courses



Important
FORMS

Elective Course Scheduling Resources

ECE course scheduling, go to ece.ucsb.edu

Senior Sequences and Electives

Students are responsible for determining and taking the necessary prerequisites for EE electives. Senior Electives **MUST** include:

- A minimum of 32 units
- A minimum of 8 courses
- EE Senior Capstone Project - ECE 188ABC (3 units each for a total of 9 units)
- A minimum of 1 sequence - required
- Additional departmental electives of your choosing

Design Sequences

- ECE 120A: VLSI Principles & ECE 120B: VLSI Architecture and Design
- ECE 120A: Integrated Circuit Design and Fabrication & ECE 120B: Integrated Circuit Design and Fabrication
- ECE 145A: Communication Electronics I & ECE 145B: Communication Electronics II
- ECE 146A: Digital Communication Fundamentals & ECE 146B: Communication Systems Design
- ECE 147A: Feedback Control Systems - Theory and Design & ECE 147B: Digital Control Systems - Theory & Design
- ECE 147A: Feedback Control Systems - Theory and Design & ECE 147C: Control Systems Design Project
- ECE 153A: Hardware / Software Interface & ECE 153B: Sensor and Peripheral Interface Design
- ECE 158: Digital Signal Processing & ECE 178: Intro to Digital Image and Video Processing
- ECE 178: Intro to Digital Image and Video Processing & ECE 181: Intro to Computer Vision
- ECE 179D: Intro to Robotics - Dynamics and Control & ECE 179F: Intro to Robotics - Planning and Kinematics

Other Sequences

- ECE 120A: VLSI Principles & ECE 120A: Integrated Circuit Design and Fabrication
- ECE 123: High Performance Digital Circuit Design & ECE 120B: VLSI Architecture and Design
- ECE 141A: Intro to Nanoelectromechanical and Microelectromechanical Systems & ECE 141B: MEMS - Processing and Device Characterization
- ECE 141A: Intro to Nanoelectromechanical and Microelectromechanical Systems & ECE 141C: Intro to Microfluidics and BioMEMS
- ECE 146: Electromagnetic Fields and Waves & ECE 155: Optical Fiber Communication
- ECE 145A: Communication Electronics I & ECE 145C: Communication Electronics III
- ECE 145A: Communication Electronics I & ECE 145A: Digital Communication Fundamentals
- ECE 146: Applications of Signal Analysis and Processing & ECE 158: Digital Signal Processing
- ECE 146: Applications of Signal Analysis and Processing & ECE 178: Intro to Digital Image and Video Processing
- ECE 154A: Intro to Computer Architecture & ECE 154B: Advanced Computer Architecture and Test Automation
- ECE 157A: Machine Learning in Design and Test Automation & ECE 157B: Artificial Intelligence in Design and Test Automation
- ECE 158: Digital Signal Processing & ECE 181: Intro to Computer Vision
- ECE 160: Multimedia Systems & ECE 178: Intro to Digital Image and Video Processing
- ECE 160: Multimedia Systems & ECE 181: Intro to Computer Vision
- ECE 162A: Quantum Description of Electronic Materials & ECE 162B: Fundamentals of Solid State

ECE Course Info

- UCSB Schedule of Classes
- Course Descriptions (UCSB General Catalog)

EE Senior Electives

EE electives allow students to acquire more in-depth knowledge in specialization areas. Potential tracks are illustrated below with recommendations for related activities.

Computer Engineering

- ECE 123: High Performance Digital Circuit Design
- ECE 120B: VLSI Principles
- ECE 120B: VLSI Architecture and Design
- ECE 158: Digital Signal Processing
- ECE 158A: Hardware / Software Interface
- ECE 153B: Sensor and Peripheral Interface Design
- ECE 154A: Introduction to Computer Architecture
- ECE 154B: Advanced Computer Architecture

Control Systems/Robotics

- Electronics Systems
- Engineering & Test Management
- Nanoelectronics Manual & Device
- Signal Processing & Communication
- VLSI Design
- Other

ece.ucsb.edu/undergrad/curriculum

Elective Course Scheduling Resources

Department of Electrical & Computer Engineering

Home Research Graduate Undergraduate News Events People Giving

Program Overview Curriculum Tenures & Awards Prospective Students Current Students **Courses**

ECE Undergraduate Courses 2022-23

This proposed schedule is subject to change. To review the most up-to-date listings of all courses, instructors, times and locations refer to [SOLD/UCSB Student Services On-Line Data](#). If you do not have access to OOLD, refer to the [UCSB Schedule of Classes](#).

Students are responsible for determining and completing the necessary prerequisites for all ECE courses.

[See ECE Graduate Courses ->](#)

Undergraduate Courses

Courses Offered: X = ECE Instructor | XD = External Dept Instructor

Number	Undergraduate Course	F2022	W2023	S2023	M2023
1A	Computer Engineering Seminar		X		
1B	Ten Puzzling Problems in Computer Engineering			X	
3	Introduction to Electrical Engineering	X	X		
5	Introduction to Electrical and Computer Engineering	X	X		
4	The Physics of Energy, Information, and Communication			X	
10A/10AL	Foundations of Analog and Digital Circuits & Systems	X	X		
10B/10BL	Foundations of Analog and Digital Circuits & Systems		X	X	
10C/10CL	Foundations of Analog and Digital Circuits & Systems	X		X	
15A	Fundamentals of Logic Design	X	X		
120A	Integrated Circuit Design & Fabrication		X		
120B	Integrated Circuit Design & Fabrication			X	
122A	VLSI Principles	X			
122B	VLSI Architecture and Design		X		
130A	Signal Analysis & Processing	X	X		
130B	Signal Analysis & Processing		X	X	
130C	Signal Analysis & Processing			X	
132	Intro to Solid State Electronic Devices	X			
134	Introduction to Fields & Waves	X			
135	Optical Fiber Communication			X	
136B	Optics and Imaging		X		

ece.ucsb.edu/undergrad/courses

DUE DATES

- Elective Sheets are due ***no later than Friday, June 16, 2023!***
- Students who have not turned in an elective sheet will be placed on a **REGISTRATION BLOCK!**






Progress Checks

- Can be run on GOLD using the degree audit system.
- GE/College level questions refer to the College of Engineering advisors, coe-info@engineering.ucsb.edu or:
 - Frances Fouch francesf@engineering.ucsb.edu
 - Shariq Hashmi shasmi@engineering.ucsb.edu
 - Sarah Ocampo socampo@engineering.ucsb.edu
- Major level questions refer to the ECE Student Office ugrad-advisor@ece.ucsb.edu

BS/MS Program

- Electrical & Computer Engineering BS/MS
See **Val de Veyra** in the ECE Student Office (Trailer 697, Room 101)
- Materials BS/MS

<https://www.materials.ucsb.edu/academics/bs-ms-5-year-program>



Department of Electrical
& Computer Engineering

BS/MS Programs

BS/MS options available for Electrical Engineering undergraduates:

- **BS in EE and MS in ECE:** email Val de Veyra, ECE Student Affairs Manager, val@ece.ucsb.edu
- **BS in EE and MS in MATRL:** see the Materials Department website, materials.ucsb.edu/academics/bsms-5-year-program
- **For students interested in Materials:** Early research into requirements is strongly recommended. Materials 100A: Chemistry 1B requirement.


Applications for the BS/MS in ECE are usually due at the end of the spring quarter of the junior year. As this is an accelerated program, it is expected that all of the required courses for the EE major are completed including all of the junior required courses. GRE exams are not required to apply

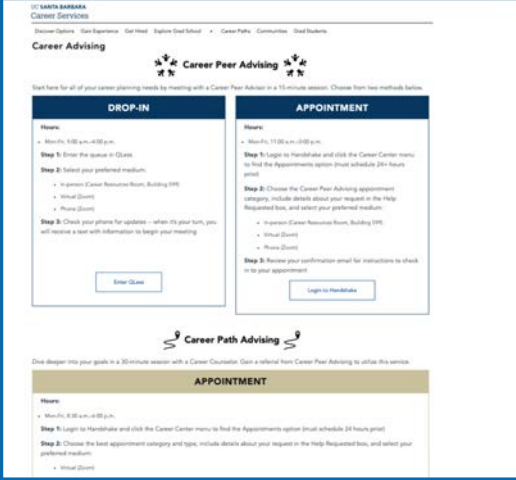
Discover Engineering 2020

Maddie W. Foster

Career Counselor/Peer & Practicum Supervisor

Engineering + Technology





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career.ucsb.edu

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Your Gaucho Paths to Success

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Engineering + Technology

Get Your Gears Turning

How many engineering disciplines can you name?

UCSB educates students in five key areas: chemical engineering, mechanical engineering, electrical engineering, computer engineering, and computer science. However, there are over 30 other engineering disciplines to discover including aerospace, automotive, biochemical, civil, environmental, geotechnical, industrial, manufacturing, nanotechnology, nuclear, petroleum, security, telecommunications, and traffic engineering. All areas overlap with basic engineering knowledge and skills.

Learn how you can pursue your discipline or pivot your UCSB education into the area of your choice through a career path in Engineering + Technology.

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<https://career.ucsb.edu/>

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Handshake

Handshake is the premium platform for Gauchos to find **jobs, internships, and career connections**. Ranging from part-time to full-time positions, on-campus and off-campus, Handshake is a gateway to fruitful employment in the world of work. Many postings are viewable exclusively to students/alumni of UCSB, providing an edge to engage with employers. Handshake also offers approved Work-Study positions, a database of thousands of employers, and much more.

💡 Looking to schedule an appointment via Handshake? Visit our [Students](#) page.

HANDSHAKE HELP CENTER

- GET ACCESS TO HANDSHAKE
- COMPLETE YOUR PROFILE
- UPDATE YOUR CAREER INTERESTS
- SEARCH THE PLATFORM
- PREPARE FOR VIRTUAL FAIRS

Get Access to Handshake

Who Has Access?

Access is available to all **registered students** with an active UCSB NetID and all **UCSB alumni**. For others looking to login to Handshake, visit our Handshake information for **Alumni, Faculty and Staff, and Recruiters**.

Special Note During COVID: UCSB students who take time off due to COVID can request access to Handshake for the first quarter of their time off. Inquiries can be directed to CareerHelp@sa.ucsb.edu.

<https://career.ucsb.edu/handshake-help-center>



**Winter 2023
Career & Internship Fair
Science, Technology
& Engineering**
Date to be Announced
career.ucsb.edu



Website

<http://www.ece.ucsb.edu/undergrad/>

This website has all the information regarding the undergraduate program.

For course offerings in ECE, the website is:

<http://www.ece.ucsb.edu/undergrad/courses/>

QUESTIONS?



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or

Val de Veyra

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