Computer Engineering
Schedule of Senior CE Electives
2011-2012 & Later

Computer Engineering Program · UC, Santa Barbara

LAST NAME, FIRST NAME	Perm #

UMAIL	PHONE #

STUDENTS ARE RESPONSIBLE FOR DETERMINING AND TAKING THE NECESSARY PREREQUISITES FOR THE CLASSES LISTED BELOW AS THEY DO CHANGE. FOR THE MOST UP-TO-DATE INFORMATION, CHECK WITH THE COMPUTER SCIENCE STUDENT OFFICE FOR CS COURSES AND THE ECE STUDENT OFFICE FOR ECE COURSES.

COURSE	UNITS
"Capstone" Project (ECE or CS 189AB)	
Sequence 1 (2 courses min.)	
Sequence 2 (2 courses min.)	
Other Electives	
MIN. REQUIRED	**40**
TOTAL UNITS:	

A total of at least ten courses (40 units minimum) including two sequences plus the Capstone Project.

Student's Signature	Date

Faculty Advisor's Signature	Date

ECE Student Office	Date

** PLEASE RETURN TO: ECE STUDENT OFFICE – TRAILER 380, ROOM 101

Updated: 8/16/16

Check Here	Sequence Topics	Senior Elective Sequences, choose two (2):
	Computer Networks	Network Computing – **Choose EITHER THE ECE OR CS SEQUENCE**: • ECE 155A & ECE 155B **OR** • CMPSC 176A & CMPSC 176B
	Computer Systems Design	• ECE 153A **OR** CMPSC 153A (Hardware/Software Interface) **AND** • ECE 153B (Sensor and Peripheral Interface Design)
	Distributed Systems	• ECE 151 **OR** CMPSC 171: Distributed Systems *AND* *ONE OR BOTH OF THE FOLLOWING COURSES:* • ECE 155A **OR** CMPSC 176A: Intro. to Computer Networks • ECE 155B **OR** CMPSC 176B: Network Computing
	Multimedia	C*hoose TWO OR MORE of the following courses:* • ECE 178 (Fundamentals of Computer Image Processing) • ECE 181B **OR** CMPSC 181B (Introduction to Computer Vision) • ECE 160 **OR** CMPSC 182 (Multimedia Computing)
	Programming Languages	• *CMPSC 160 (Translation of Programming Languages) • *CMPSC 162 (Programming Languages) (*Note: CMPSC 138, a Junior year course, is the prerequisite for both CMPSC 160 & 162)
	Real-Time Computing & Control	• *ECE 147A (Feedback Control Systems - Theory and Design, **5 units**) (*Note: ECE 147A prerequisite is ECE 130ABC – Junior year) • ECE 147B (Digital Control Systems - Theory and Design, **5 units**)
	Very Large Scale Integration (VLSI)	• ECE 122A/124A (VLSI Principles) **OR** ECE 123 (High-Performance Digital Circuit Design) *AND* • ECE 122B/124D (VLSI Architecture and Design)
	Robotics	• ECE 179D (Introduction to Robotics: Dynamics and Control) • ECE 179P (Introduction to Robotics: Planning and Kinematics)
	Signals & Systems	• ECE 130A (Signal Analysis & Processing) • ECE 130B (Signal Analysis & Processing)

Check Here	Acceptable Additional Courses	Units
Capstone Project	*Required Senior "Capstone" Computer Systems Project: ***ECE 189A/B** (Two quarters of instruction, 4 units each quarter for a total of 8 units); (**Note**: ECE 153B, Sensor & Peripheral Interface Design, is a prerequisite for ECE 189A/B); **OR** ***CMPSC 189A/B** (Two quarters of instruction, 4 units each quarter for a total of 8 units) **(*Note: CMPSC 56, Advanced Applications Programming, is a now an official prerequisite course for the CMPSC189A/B Capstone.)**	8
	CMPSC 130B (Data Structures and Algorithms II)	4
	CMPSC 138 (Automata and Formal Languages)	4
	CMPSC 153A/ECE 153A (Hardware/Software Interface)	4
	CMPSC 160 (Translation of Programming Languages)	4
	CMPSC 162 (Programming Languages)	4
	CMPSC 165A (Artificial Intelligence)	4
	CMPSC 165B (Machine Learning)	4
	CMPSC 176A/ECE 155A (Introduction to Computer Communication Networks)	4
	CMPSC 176B/ECE 155B (Network Computing)	4
	CMPSC 176C (Advanced Topics in Internet Computing)	4
	CMPSC 177 (Computer Security)	4
	CMPSC 178 (Introduction to Cryptography)	4
	CMPSC 181B/ECE 181B (Introduction to Computer Vision)	4
	ECE 122A/124A (VLSI Principles)	4
	ECE 122B/ECE124D (VLSI Architecture and Design)	4
	ECE 123 (High-Performance Digital Circuit Design)	4
	ECE 130A (Signal Analysis and Processing	4
	ECE 130B (Signal Analysis and Processing)	4
	ECE 130C (Signal Analysis and Processing)	4
	ECE 147A (Feedback Control Systems – Theory and Design)	**5**
	ECE 147B (Digital Control Systems – Theory and Design)	**5**
	ECE 150 (Mobile Embedded Systems)	4
	ECE 151 (Distributed Systems)	4
	ECE 153B (Sensor and Peripheral Interface Design)	4
	ECE 154B (Advanced Computer Architecture)	4
	ECE 156B (Computer-Aided Design of VLSI Circuits)	4
	ECE 160 (Multimedia Systems)	4
	ECE 178 (Fundamentals of Computer Image Processing)	4
	ECE 179D (Instruction to Robotics: Dynamics and Control)	4
	ECE 179P (Introduction to Robotics: Planning and Kinematics)	4