

BS Computer Engineering Curriculum

Spring 2015-Summer 2019 (120 hours)

Catalog.unm.edu

FRESHMAN YEAR-FIRST YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	Cr	Course #	core	Cr
ECE 101: Intro to ECE		1	ECE 231L: Intermediate Programming		4
ECE 131L: Programming Fundamentals		4	MATH 1522: Calculus II [MATH 163]		4
ENGL 1110: Composition I [ENGL 110] (or equivalent based on placement)	WS	3	ENGL 1120: Composition II [ENGL 120]	WS	3
MATH 1512: Calculus I [MATH 162]	MTH	4	PHYS 1320: Gen. Phys. II [PHYC 161]	PNS	3
PHYS 1310: Gen. Phys. I [PHYC 160]	PNS	3	PHYS 1320L: Gen. Phys. II Lab [PHYC 161L]	PNS	1
Total		15	Total		15
SOPHOMORE YEAR-SECOND YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	Cr	Course #	core	Cr
ECE 203: Circuit Analysis I		3	ECE 206L: Instrumentation		2
ECE 238L: Computer Logic Design		4	ECE 213: Circuit Analysis II		3
Basic Science with Laboratory		4	ECE 300: Advanced Eng. Mathematics		4
ECON 2110/2120: Macro/Micro [ECON 105/106]	SB	3	ECE 330: Software Design <i>Spring Only</i>		3
ENGL 2210: Tech. Writing [ENGL 219]	WS	3	MATH 2530: Calculus III [MATH 264]		4
Total		17	Total		16
JUNIOR YEAR-THIRD YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	Cr	Course #	core	Cr
ECE 314L: Signals and Systems		4	ECE 331: Data Structure Alg. <i>Spring Only</i>		3
ECE 321L: Electronics I <i>Fall Only</i>		4	ECE 344L: Microprocessors		4
ECE 340: Probabilistic Methods		3	Technical Elective***		3
MATH 327: Discrete Structures		3			
Foreign Language Core* #	FL	3	Social/Behavioral Sciences Core * #	SB	3
Total		17	Total		13
SENIOR YEAR-FOURTH YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	Cr	Course #	core	Cr
ECE 419: Senior Design I		3	ECE 420: Senior Design II		3
ECE 437: Operating Systems		3	ECE 440: Comp. Networks		3
ECE Track Course**		3	ECE Track Course**		3
Technical Elective***		3	Fine Arts Core *	FA	3
Humanities Core * #	HU	3	Humanities Core * #	HU	3
Total		15	Total		15

*See approved list of core electives in the UNM Course Catalog. Catalog.unm.edu

**ECE track courses for Computer Engineering consist of ECE 338 and 438, or ECE 335 and 435

***Technical electives are developed in consultation with your faculty advisor and can be taken from ECE, Computer Science, Physics, Math or other engineering-related courses 300-level or above.

No grades below a 'C' are allowed in the Computer Engineering Program.

Denotes course that meets "U.S. and Global Diversity and Inclusion" 3 credit undergraduate requirement. See LoboTrax for full list of courses.

BS Computer Engineering Graduation Requirements

Spring 2015–Summer 2019

Total credit hours: 120; All grades must be C or better in the Computer Engineering Program
For more information, see the UNM Course Catalog catalog.unm.edu

General Education Component

Written Communication (9 credits)

ENGL 1110♦ Composition I (3) (or ENGL 1110x and 1110y
Composition I: Stretch I and II (6);
or ENGL 1110z Enhanced Composition (4))
ENGL 1120 Composition II (3)
ENGL 2210 Technical Writing (3)

Area of Knowledge (18 credits)

Core Social/Behavioral Science Elective (3)
ECON 2110/2120 (Social/Beh. Science) (3)
Core Humanities Elective (6)
Core Fine Arts Elective (3)
Core Foreign Language Elective (3)

Mathematics & Sciences Component

Mathematics (19 credits)

MATH 1512♦, 1522♦, 2530 Calculus I, II, III (12)
ECE 300- Advanced Engineering Mathematics (4)
MATH 327 Discrete Structures (3)

Science (11 credits)

PHYS 1310*, 1320*, 1320L*
General Physics I and II plus II lab (7)
Additional approved basic science: * (4)
(BIOL 1110 w/1110L, 1140 w/1140L, 2110L, 2410L;
CHEM 1215w/ 1215L; PHYS 2310 w/2310L;
or ASTR 2110 w/2110L, 2115 w/ 2115L)

Diversity (3 credits)

The U.S. & Global Diversity & Inclusion undergraduate requirement promotes a broad-scale understanding of the culture, history or current circumstance of diverse groups of people who have experienced historic and/or contemporary inequitable treatment in the U.S. or in a global context. See LoboTrax for full list of courses.

Denotes course that meets "U.S. and Global Diversity and Inclusion" 3 credit undergraduate requirement. See LoboTrax for full list of courses.

Computer Engineering Component

Required (54 credits)

ECE 101 Introduction to ECE (1)*
ECE 131L Programming Fundamentals (4)*
ECE 203 Circuit Analysis I (3)*
ECE 206L Instrumentation (2)
ECE 213 Circuit Analysis II (3)
ECE 231L Intermediate Programming (4)*
ECE 238L Computer Logic Design (4)
ECE 314L Signals & Systems (4)
ECE 321L Electronics I (4)
ECE 330 Software Design (3)
ECE 331 Data Structures & Algorithms (3)
ECE 340 Probabilistic Methods (3)
ECE 344L Microprocessors (4)
ECE 419 Senior Design I (3)
ECE 420 Senior Design II (3)
ECE 437 Operating Systems (3)
ECE 440 Computer Networks (3)

Track Courses (6 credits - depth)

Hardware Emphasis

ECE 338 Intermediate Logic Design (3)
ECE 438 Design of Computers (3)

--or--

Software Emphasis

ECE 335 Integrated Software Systems (3)
ECE 435 Software Engineering (3)

Technical Electives (6 credits - breadth)

ECE Technical Elective (6)
Approved 300-level and above courses developed in consultation with your faculty advisor

NOTICE (Effective Fall 2019):

UNM has moved to Common Course Numbering (CCN). This curriculum sheet has the updated CCN & previous course numbers for your convenience.

ECE 131, 231, and 314 now have a lab component. Each of these courses are now 4 credit hours.

ADMISSION TO ECE DEPARTMENT

Eighteen hours of prerequisite technical courses must be completed with a GPA of 2.5 or better:

♦ Denotes required prerequisites that must be completed for admission to ECE.

* Denotes additional courses from which ten additional hours of prerequisite course work must be completed.

Additionally, a cumulative GPA of a 2.20 is required. Admission will be automatic upon completion of these requirements.

Note: A student's cumulative GPA must not fall below 2.30, the minimum for good academic standing.