

BS Electrical Engineering Curriculum

Spring 2015-Summer 2019 (120 hours)

Catalog.unm.edu

FRESHMAN-FIRST YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
ECE 101: Intro to ECE		1	MATH 1522: Calculus II [MATH 163]		4
ECE 131L: Programming Fundamentals		4	ECON 2110/2120: Macro/Micro [ECON 105/106]	SB	3
ENGL 1110: Composition I [ENGL 110] <i>(or equivalent based on placement)</i>	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
		15			14
SOPHOMORE-SECOND YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
ECE 203: Circuit Analysis I		3	ECE 206L: Instrumentation		2
ECE 238L: Comp. Logic Design		4	ECE 213: Circuit Analysis II		3
MATH 2530: Calculus III [MATH 264]		4	ECE 300: Advanced Eng. Mathematics		4
PHYS 2310: Gen. Phys. III [PHYC 262]		3	Basic Science or Math Elective		3
ENGL 2210: Tech. Writing [ENGL 219]	WS	3	Humanities Core * #	HU	3
		17			15
JUNIOR-THIRD YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
ECE 314L: Signals and Systems		4	ECE 322L: Electronics II <i>Spring Only</i>		4
ECE 321L: Electronics I <i>Fall Only</i>		4	ECE 344L: Microprocessors		4
ECE 340: Probabilistic Methods		3	ECE 360L: EM Fields and Waves <i>Spring Only</i>		4
ECE 371: Materials and Devices <i>Fall Only</i>		3	ECE 381: Intro to Power Systems <i>Spring Only</i>		3
Social/Behavioral Sciences Core * #	SB	3	Humanities Core * #	HU	3
		17			18
SENIOR-FOURTH YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
ECE 341: Intro to Comm. Systems <i>Fall Only</i>		3	ECE 420: Senior Design II		3
ECE 345: Intro to Control Systems		3	ECE Track Course**		3
ECE 419: Senior Design I		3	Technical Elective***		3
ECE Track Course**		3			
Fine Arts Core *	FA	3	Foreign Language Core * #	FL	3
		15			12

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

**ECE track courses for Electrical Engineering must be from a listed track.

***Technical elective is developed in consultation with your academic advisor and can be taken from ECE, Computer Science, Physics, Math or other engineering-related courses 300-level or above. (ECE 231L: Intermediate Programming is the only 200-level exception)

No grades below a 'C' are allowed in the Electrical 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 Electrical Engineering Graduation Requirements

Spring 2015–Summer 2019

Total credit hours: 120; All grades must be C or better in the Electrical Engineering Program

For more information, see the UNM Course Catalog catalog.unm.edu

General Education Component

Written Communication (9 credit)

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 (16 credits)

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

Science (13 credits)

PHYS 1310*, 1320* & 1320L*, 2310*
General Physics I, II plus II lab, and III (10)
Basic Science or Mathematics 300 level and above *(3)
(CHEM 1215 or 1225, BIOL 1110 or 1140 or 2410L,
ASTR 2110 or 2115)

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.

Electrical Engineering Component

Required (38 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 238L Computer Logic Design (4)
ECE 314L Signals & Systems (4)
ECE 321L Electronics I (4)
ECE 340 Probabilistic Methods (3)
ECE 344L Microprocessors (4)
ECE 419 Senior Design I (3)
ECE 420 Senior Design II (3)

EE Completeness (20 credits)

ECE 322L Electronics II (4)
ECE 341 Intro to Communication Systems (3)
ECE 345 Intro to Control Systems (3)
ECE 360L Electromagnetic Fields & Waves (4)
ECE 371 Materials & Devices (3)
ECE 381 Intro to Power Systems (3)

Track Courses (6 credits - depth)

Two courses from one of the following available tracks (6)
(see LoboTrax for list of courses):

- Digital Systems - Optoelectronics
- Power/Energy Systems - Signals and Communications
- Systems and Controls - Electromagnetics
- Microelectronics

Technical Elective (3 credits - breadth)

ECE Technical Elective (3)
Approved 300-level and above course developed in consultation with your faculty advisor
May include ECE 231L Intermediate Programming (4)

NOTICE (Effective Fall 2019):

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

ECE 131, 314 and 360 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.