

BS Electrical Engineering Curriculum

Effective **Spring 2015** (120 hours)

UNM Core Curriculum, June 2015

FRESHMAN-FIRST YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
Math 162: Calculus I	*MTH	4	Math 163: Calculus II		4
ECE 101: Intro to ECE		1	Phyc 161: General Physics II	*PNS	3
ECE 131: Programming Fundamentals		3	Phyc 161L: General Physics II Lab	*PNS	1
Phyc 160: General Physics I	*PNS	3	Econ 105 or 106* Macro/Microeconomics	*SB	3
ENGL 110: Accelerated Composition	*WS	3	ENGL 120: Composition III	*WS	3
		14			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
Phyc 262: General Physics III		3	ECE 300: Advanced Eng. Mathematics		4
Math 264: Calculus III		4	Basic Science or Math Elective		3
English 219: Technical Writing	*WS	3	Humanities	*HU	3
		17			15
JUNIOR-THIRD YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
ECE 314: Signals and Systems		3	ECE 322L (ECE Completeness Course)		4
ECE 321L: Electronics I		4	ECE 344L: Microprocessors		4
ECE 340: Probabilistic Methods		3	ECE 360 (ECE Completeness Course)		3
ECE 371 (ECE Completeness Course)		3	ECE 381 (ECE Completeness Course)		3
Social/Behavioral Science	*SB	3	Humanities	*HU	3
		16			17
SENIOR -FOURTH YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	CR	Course #	core	CR
ECE 341 (ECE Completeness Course)		3	ECE 420: Senior Design II		3
ECE 345 (ECE Completeness Course)		3	ECE Track Course**		3
ECE 419: Senior Design I		3	Senior Tech Elective***		3
ECE Track Course**		3			
Fine Arts	*FA	3	Foreign Language	*FL	3
		15			12

♦EE Completeness courses ONLY offered in Fall are ECE 345 (3), ECE 371 (3), and ECE 341 (3).

♦EE Completeness courses ONLY offered in Spring are ECE 322L (4), ECE 360 (3), and ECE 381 (3).

*See approved list of core electives in the ECE Undergraduate Handbook.

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

***Senior 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. (*ECE 231: Intermediate Programming is the only exception)

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

Electrical Engineering Graduation Requirements

Effective **Spring 2015**

Total credit hours: 120; All grades must be C or better

General Education Component

Written Communication (9 credit)

Engl 101♦, 102 Composition I, II (6)
Engl 219 Technical Writing (3)

Area of Knowledge (18 credits)

Core Social/Behavioral Science Elect. (3)
Econ 105 or 106 (Social & Beh. Science) (3)
Core Humanities Elective (6)
Core Fine Arts Elective (3)
Core Second-Language Elective (3)

Mathematics & Sciences Component

Mathematics (16 credits)

Math 162♦, 163♦, 264 Calculus I, II, III (12)
ECE 300- Advanced Engineering Mathematics (4)

Science (13 credits)

Phys 160* 161* 161L*, 262* General Physics (10)
Basic Science or Mathematics 300 level and above (3)
(Chem 121 or 122, Bio 110 or 123 or 202, Astr 270 or 271)

Electrical Engineering Component

Required (36 credits)

ECE 101 Introduction to ECE (1)
ECE 131 Programming Fundamentals (3)*
ECE 203 Circuit Analysis I (3)*
ECE 206L Instrumentation (2)
ECE 213 Circuit Analysis II (3)
ECE 238L Computer Logic Design (4)
ECE 314 Signals & Systems (3)
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 (19 credits)

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

Track Courses (6 credits - depth)

Two courses from six tracks (6). The available tracks are:

- Digital Systems
- Electromagnetics
- Microelectronics
- Optics
- Power/Energy Systems
- Signals and Systems
- Systems and Controls

Technical Elective (3 credits - breadth)

ECE Technical Elective (3)
Approved 300-level and above courses may include ECE 231, Intermediate Programming (3). Consult with the advisor.

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Eighteen hours of prerequisite technical courses must be completed prior to applying to the department. A GPA of 2.50 or better on prerequisite coursework is required for admission into the department, and a student's overall GPA must not fall below 2.0

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

* Ten additional hours of prerequisite course work must be chosen from these courses