BS Electrical Engineering Curriculum

Effective **Spring 2015** (120 hours)

UNM Core Curriculum, as of June 2015

FRESHMAN-FIRST YEAR

FALL SEMESTER			SPRING SEMESTER		
Course #	**core**	**CR**	**Course #**	**core**	**CR**
ECE 101: Intro to ECE		1	MATH 163: Calculus II		4
ECE 131: Programming Fundamentals		3	ECON 105 or 106* Macro/Microeconomics	SB	3
ENGL 110: Accelerated Composition *(or equivalent based on placement)*	WS	3	ENGL 120: Composition III	WS	3
MATH 162: Calculus I	MTH	4	PHYC 161: General Physics II	PNS	3
PHYC 160: General Physics I	PNS	3	PHYC 161L: General Physics II Lab	PNS	1
		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
MATH 264: Calculus III		4	ECE 300: Advanced Eng. Mathematics		4
PHYC 262: General Physics III		3	Basic Science or Math Elective		3
ENGL 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: Electronics II *Spring Only*		4
ECE 321L: Electronics I *Fall Only*		4	ECE 344L: Microprocessors		4
ECE 340: Probabilistic Methods		3	ECE 360: EM Fields and Waves *Spring Only*		3
ECE 371: Materials and Devices *Fall Only*		3	ECE 381: Intro to Elec. Power Syst. *Spring Only*		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 Intro to Comm. Systems *Fall Only*		3	ECE 420: Senior Design II		3
ECE 345/ME 380 Intro to Control Syst.		3	ECE Track Course**		3
ECE 419: Senior Design I		3	Technical Elective***		3
ECE Track Course**		3			
Fine Arts*	FA	3	Foreign Language*#	FL	3
		15			12

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

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

****Technical elective is 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. (ECE 231: 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.

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BS Electrical Engineering Graduation Requirements
Effective Spring 2015

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

General Education Component

Written Communication (9 credit)

ENGL 110◆ Accelerated Composition (3)
(or ENGL 111 & ENGL 112 Composition I & II (6);
or ENGL 113 Enhanced Composition (4))
ENGL 120 Composition III (3)
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)

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.

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)

Required EE Completeness (19 credits)

ECE 322L Electronics II (4)
ECE 341 Intro to Communication Systems (3)
ECE 345 Intro to Control Systems (3)
ECE 360 Electromagnetic Fields & Waves (3)
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):

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

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 231 Intermediate Programming (3)

Eighteen hours of prerequisite technical courses must be completed prior to applying to the department.
A GPA of 2.5 or better on prerequisite coursework is required for admission to the department. A student's overall GPA must not fall below 2.20
◆ *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.*

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