BS/MS Electrical Engineering Shared Credit (4+1) Option

Spring 2015-Spring 2019 (BS 120 hours)

MS 31 hours; up to 9 credits hours of 4**/5** are shared from BS to MS

FRESHMAN-FIRST YEAR						
FALL SEMESTER				**SPRING SEMESTER**		
Course #	**core**	**CR**		**Course #**	**core**	**CR**
ECE 101: Intro to ECE		1		MATH 163: Calculus II	MTHf	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	PNSF	3		PHYC 161L: General Physics II Lab	PNS	1
	Total	**14**			**Total**	**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		3		Humanities		3
	Total	**17**			**Total**	**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
Foreign Language Core* #	FL	3		Humanities		3
	Total	**16**			**Total**	**15**
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 5** Elective (Shared Credit) [1,2]		3
ECE 419: Senior Design I		3		ECE 4**/5** Elective (Shared Credit) [1,2]		3
ECE 4**/5** Elective (Shared Credit) [1,2]		3		Elective any course/Graduate Major Core course		3
Fine Arts		3				
	Total	**15**			**Total**	**12**
MS PROGRAM- FIFTH YEAR						
FALL SEMESTER				**SPRING SEMESTER**		
Course #	**core**	**CR**		**Course #**	**core**	**CR**
Graduate Major Core course		3		Graduate Major Core course		3
Graduate Elective course		3		Graduate Minor course		3
Graduate Elective course		3		MS Project course (ECE 551)		3
ECE 590: Graduate Seminar		1				
Total		**10**		**Total**		**9**

[1] *A maximum of 6 credit hours of 400-level ECE courses may be applied toward the MS degree.*

[2] *4+1 Shared Credit students MUST take electives at the 500- level when available. See UNM catalog for eligible courses; course marked with a double asterisk (** 400) are NOT eligible for shared credit. 200/300 level courses are not eligible for the Shared Credit Program.*

Grading: *500-level courses must be earned with a B or better.*

Registering*: Students must complete a "green card" aka level restriction to manually be enrolled in any 500-level course while an undergraduate. Obtain form online at registrar.unm.edu, or from OGS Humanities bldg. Suite 107*

Updated February 4, 2019

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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)

Social and Behavioral Core Elective (3)
ECON 105 or ECON 106 (3) Social Behv. Elective
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.
# Denotes UNM Core courses that may be double counted to satisfy both Core and Diversity.

Electrical Engineering Component

Required (55 credits)

ECE 101 Introduction to ECE (1)
ECE 131L 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 314L Signals & Systems (3)
ECE 321L Electronics I (4)
ECE 322L Electronics II (4)
ECE 340 Probabilistic Methods (3)
ECE 341 Intro to Communication Systems (3)
ECE 344L Microprocessors (4)
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)
ECE 419 Senior Design I (3)
ECE 420 Senior Design II (3)

Track Courses (6 credits)

Two courses from one of the following areas:

- Digital Systems
- Electromagnetics
- Microelectronics
- Optoelectronics
- Power/Energy Systems
- Sign/Comm. Systems
- Systems and Controls

Technical Elective (3 credits)

3 credits (one course) 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).

Shared Credit (4+1)

- Shared Credit students will take electives at the 5** level when available. See UNM catalog for eligible courses and 400/500 cross-listings. 200-300 level courses are NOT eligible for the Shared Credit program.
- A maximum of 6 hours of 400-level courses may be applied toward the MS degree.
- No grades below a 'B' are allowed for 4+1 Shared Credit program.

**Disclaimer: This form is not intended to replace advising and only acts as an example of how best to utilize the Shared Credit Program (4+1). For your convenience we have included important policy and program requirements. This list is not inclusive. Requirements are subject to change. Students should refer to the UNM course catalog, departmental websites, Office of Graduate Studies and/or department advisors for questions/concerns.*

Updated February 24, 2019