

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

Spring 2015-Spring 2019 (120 hours)

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

FRESHMAN YEAR- FIRST YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	Cr	Course #	core	Cr
ECE 101: Intro to ECE		1	ECE 231: Intermediate Programming		3
ECE 131: Programming Fundamentals		3	MATH 163: Calculus II		4
ENGL 110: Accelerated Composition (or equivalent based on placement)	WS	3	ENGL 120: Composition III	WS	3
MATH 162: Calculus I	MTH	4	PHYC161: General Physics	PNS	3
PHYC 160: General Physics	PNSf	3	PHYC161L: General Physics Lab	PNS	1
Total		14	Total		14
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
ENGL 219: Technical Writing	WS	3	ECE 330: Software Design <i>Spring Only</i>		3
ECON 105 or 106: Macro/Microeconomics	SB	3	MATH 264: Calculus III		4
Total		17	Total		16
JUNIOR YEAR- THIRD YEAR					
FALL SEMESTER			SPRING SEMESTER		
Course #	core	Cr	Course #	core	Cr
ECE 314: Signals and Systems		3	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	Social/Behavioral Sciences Core	SB	3
MATH 327: Discrete Structures		3	Humanities Core Elective* #	HU	3
Foreign Language Core* #	FL	3	ECE 5** Elective (Shared Credit) ²		3
Total		17	Total		16
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 Track Course		3	ECE Track Course		3
ECE 437: Operating Systems (Shared Credit) ¹		3	ECE 440: Comp. Networks (Shared Credit) ¹		3
ECE 5** Elective (Shared Credit) ²		3	Elective any course/Graduate Major Core		3
Humanities Core Elective* #	HU	3	Fine Arts Core	FA	3
Total		15	Total		15
MS PROGRAM- FIFTH YEAR					
FALL SEMESTER			SPRING SEMESTER		
Graduate Major Course		3	Graduate Major Course or Graduate Elective		3
Graduate Elective Course		3	Graduate Minor Course		3
Graduate Elective Course		3	MS Project (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

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Written Communication (9 credits)

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 (3) Technical Writing

Area of Knowledge (18 credits)

Social & Behavioral Sciences Elective (3)
ECON 105 or ECON 106 (Social & Behavioral Sciences) (3)
Core Humanities Elective (6)
Core Fine Arts Elective (3)
Core Second-Language Elective (3)

Mathematics & Sciences Component

Mathematics (19 credits)

Math 162♦, 163♦, 264 Calculus I, II, III (12)
Math 327 Discrete Structures (3)
ECE 300 Advanced Engineering Mathematics (4)

Science (11 credits)

Phys 160, 161, 161L, General Physics (7)
Additional approved basic sciences: (4)
(Biol 110 w/112L, 123 w/124L, 201L, 202L; Chem 121w/
123L; Phys 262 w/262L; or Astr 270 w/270L, 271 w/271L)

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.

Computer Engineering Component

Required (51 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 231L Intermediate Programming (3)
ECE 238L Computer Logic Design (4)
ECE 314 Signals & Systems (3)
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)

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)

Any approved 300-level and above courses from ECE, MATH, PHYC, CS or other ENG departments.

Shared Credit (4+1)

- ECE 437 and ECE 440 will apply as 6 of the 9 shared credit hours. The remaining 3 hours must come from 500-level ECE course.
- 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 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.*