

This four-year roadmap lists all of the curriculum requirements for the BS in Electrical Engineering program, but note that **students' actual semesters and overall timeline may look different, and in fact, it's extremely rare for students to follow this roadmap as it's laid out.** Students' actual plans will differ based on a number of factors and this roadmap should only be used as a tool alongside other resources. **Students should plan and tailor their overall degree plan based on their individual needs and conditions,** such as completed/missing pre-requisites, scholarship requirements, academic/personal workload, Fall/Spring only classes, potential Summer courses, etc.

Semester One	Cr	Admit Req	Gen Ed	Notes
ENGL 1120 Composition II	3	Y	COMM	Pre-major admit requirement
MATH 1512 Calculus I	4	Y	MATH	Pre-major admit requirement
PHYS 1310 Calc-based Physics I	3	*	CHOICE	Lab 1310L not required
ECE 101 Intro to ECE	1	*		
ECE 131L Programming Fundamentals	4	*		
Total Credit Hours	15			

Semester Two	Cr	Admit Req	Gen Ed	Notes
MATH 1522 Calculus II	4	Y	CHOICE	Pre-major admit requirement
PHYS 1320 Calc-based Physics II	3	*	PNS	
PHYS 1320L Calc-based Physics II Lab	1	*	PNSL	
ECE 238L Computer Logic Design	4	*		
ENGL 2210 Professional/Technical Comm	3		COMM	See Catalog for options
Total Credit Hours	15			

Semester Three	Cr	Admit Req	Gen Ed	Notes
ECE 203 Circuit Analysis I	3	*		
MATH 2531 Calculus III	4	*		
PHYS 2310 Calc-Based Physics III	3	*		Lab 2310L not required
ENG 220 Engineering, Business & Society^	3			Fall only %
Second Language Gen Ed elective	3		SL	See Catalog for options
Total Credit Hours	16			

Semester Four	Cr	Admit Req	Gen Ed	Notes
ECE 213 Circuit Analysis II	3	*		
ECE 300 Advanced Engineering Mathematics	4			MATH 314+316 may substitute
ECE 206L Instrumentation	2	*		
Basic Science or Math 3** or above elective	3	*		See Catalog for options
Humanities Gen Ed Elective #	3		HUM	See Catalog for options
Total Credit Hours	15			

Semester Five	Cr	Admit Req	Gen Ed	Notes
ECE 314L Signals and Systems	4			
ECE 321L Electronics I	4			Fall only %
ECE 340 Probabilistic Methods	3			
ECE 371 Materials and Devices	3			Fall only %
Total Credit Hours	14			

Semester Six	Cr	Admit Req	Gen Ed	Notes
ECE 322L Electronics II	4			Spring only %
ECE 344L Microprocessors	4			
ECE 360 Electromagnetic Fields and Waves	4			Spring only %
ECE 381 Intro to Electric Power Systems	3			Spring only %
Total Credit Hours	15			

Semester Seven	Cr	Admit Req	Gen Ed	Notes
ECE 419 Senior Design I	3			Senior standing required
ECE 341 Intro to Communication Systems	3			Fall only %
ECE 345 Intro to Control Systems	3			
ECE Upper Division elective	3			See Catalog for options
ECON 2110 or 2120 Macro or Microeconomics	3		SB	
Total Credit Hours	15			

Semester Eight	Cr	Admit Req	Gen Ed	Notes
ECE 420 Senior Design II	3			
ECE Upper Division elective	3			See Catalog for options
ECE 400-level elective	3			See Catalog for options
Diversity # or any elective	3			See Catalog for options
Art and Design Gen Ed Elective	3		ART	See Catalog for options
Total Credit Hours	15			

Degree Total 120

Courses in grey represent courses that satisfy the UNM General Education Curriculum.
 Courses in green are upper division (300s, 400s) and are program restricted. In addition to meeting their pre-requisites, students must be admitted into the ECE Department as majors to enroll in them.

A minimum grade of C is required for all courses. A grade of C- is NOT considered passing. Credit/No Credit, CR/NC, is not an option for any required course.

If a Humanities course that also counts as Diversity is taken, students are not required to complete an additional Diversity but may instead choose any elective to fulfill those 3 hours

% Fall/Spring only ECE courses are subject to change. For pending changes, see ece.unm.edu

* Denotes technical courses that qualify towards ECE departmental admission

^Students with curriculums prior to Fall 2021 may opt to take any 3 hour elective instead of ENG 220

To determine potential plans of study, current and prospective students should utilize all available resources, some of which are listed here:

catalog.unm.edu	Comprehensive source of departmental, college, and university-wide information for all UNM programs and policies. Includes list of all courses and their pre-requisites.
gened.unm.edu	Dedicated website for the General Education curriculum all NM students are required to complete as part of the undergrad program. Includes a list of Diversity courses.
ece.unm.edu	Electrical & Computer Engineering home website. Department information including program, advisement, and course pre-reqs/Fall or Spring only details.
degrees.unm.edu	Interactive degree road-maps that highlight course sequencing/pre-requisites.
Loboachieve.unm.edu	Scheduling website for academic advisement appointments. Students can schedule meetings with ECE advisors, as well as any other advisors/porgrams throughout UNM.
eceadvise@unm.edu	Email for ECE academic advisors. Current UNM students MUST use their UNM email to contact advisors. Important messages from this address will be sent out frequently.
LOBO Trax Degree Audit	Course planning tool/checklist for current students that shows what's completed and what's left to complete for the degree. Found in LoboWeb via my.unm.edu.

General Education Curriculum (31 credit hours)

Communication-COMM 6hrs	ENGL 1120 Composition II, 3hrs (Students that place out will need another Communication elective) ENGL 2210, 3hrs
Mathematics/Statistics-MATH 3hrs	MATH 1512 Calculus I
Physical/Natural Sciences-PNS/PNSL 4hrs	PHYS 1320 & 1320L Calc-based Physics II with Lab
Social/Behavioral Sciences-SB 3hrs	ECON 2110 or 2120 Macro or Microeconomics
Humanities-HUM 3hrs	Course of your choice. See gened.unm.edu or Catalog for list of approved options.
Art and Design-ART 3hrs	Course of your choice. See gened.unm.edu or Catalog for list of approved options.
Second Language-LANG 3hrs	Course of your choice. See gened.unm.edu or Catalog for list of approved options.
Student Choice-CHOICE 6hrs Two additional courses from different Gen Ed areas	MATH 1522 Calculus II PHYS 1310 Calc-based Physics I

Mathematics (12 credit hours)

MATH 1512*, MATH 1522*, MATH 2531* Calculus I, II and III

Science (13 credit hours)

PHYS 1310*, PHYS 1320*, 1320L*, PHYS 2310 Physics I, II and II lab, and III
Basic Science or Mathematics (3 credit hours)*: CHEM 1215, 1225, BIOL 1110, 1140, ASTR 2110, 2115, or MATH 3** level or above (except MATH 314 and 316)

Diversity (3 credit hours)

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. Some Humanities courses are also eligible as Diversity courses and be counted towards both requirements.

Electrical Engineering Lower Division Requirements (17-20 Credit Hours)

Lower Division courses are not program restricted. ECE pre-majors & non-ECE student may take these.

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)

ENG 220 Engineering, Business & Society (3) [not required for curriculums prior to Fall 2021]

ECE Departmental Admission Criteria (pre-major to admitted major)

ENGL 1110 or higher, MATH 1512 & 1522, and at least 18 credit hours of MATH and Science-based courses (technical courses) with a minimum 2.5 GPA in these courses. A 2.3 cumulative GPA is also required. Admission is automatic upon completion of criteria.

* Denotes courses that qualify towards ECE departmental admission

Students must be admitted as ECE degree seeking to take 300 and 400-level courses.

Electrical Engineering Upper Division Requirements (54 Credit Hours)

ECE 300 Advanced Engineering Mathematics (4)

ECE 314L Signals & Systems (4)

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 (4)

ECE 371 Materials & Devices (3)

ECE 381 Intro to Electric Power Systems (3)

ECE 419 Senior Design I (3)

ECE 420 Senior Design II (3)

ECE Upper Division Elective, 2 courses (6)

ECE 4** Elective (3)

Math sequencing to reach MATH 1512 Calculus I

The four-year plan assumes students will start off at MATH1512 but it is more often the case that students will begin at a different math level. Here are all of the relevant courses UNM offers that lead to 1512:
FYEX 1010 Foundational Math → MATH 1215 Intermediate Algebra → MATH 1220 College Algebra → 1250 Trig & Precalc (or both 1230 Trigonometry and 1240 Pre-calculus) → MATH 1512 Calculus I