

This 4 year roadmap lists all course requirements for the BS in Electrical Engineering program, but note that each 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. **Each student 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 |                             |
| ECE 101 Intro to ECE            | 1         | *         |        |                             |
| ECE 131L Progammng Fundamentals | 4         | *         |        |                             |
| <b>Total Credit Hours</b>       | <b>15</b> |           |        |                             |

| 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         | *         |        |                             |
| Communication Gen Ed Elective        | 3         |           | COMM   | See Catalog for options     |
| <b>Total Credit Hours</b>            | <b>15</b> |           |        |                             |

| Semester Three                           | Cr        | Admit Req | Gen Ed | Notes                   |
|--|-----------|-----------|--------|-------------------------|
| ECE 203 Circuit Analysis I               | 3         | *         |        |                         |
| MATH 2531 Calculus III                   | 4         | *         |        |                         |
| ECE 300 Advanced Engineering Mathematics | 4         | *         |        |                         |
| ENG 220 Engineering, Business & Society  | 3         |           |        | Fall only               |
| Art and Design Gen Ed Elective           | 3         |           | ART    | See Catalog for options |
| <b>Total Credit Hours</b>                | <b>17</b> |           |        |                         |

| Semester Four                        | Cr        | Admit Req | Gen Ed | Notes                      |
|--------------------------------------|-----------|-----------|--------|----------------------------|
| ECE 213 Circuit Analysis II          | 3         | *         |        |                            |
| PHYS 2310 Calculus-Based Physics III | 3         |           |        |                            |
| ECE 206L Instrumentation             | 2         | *         |        |                            |
| Basic Science or Math 3** Elective   | 3         | *         |        | See curriculum for options |
| Second Language Gen Ed Elective      | 3         |           | LANG   | See Catalog for options    |
| <b>Total Credit Hours</b>            | <b>14</b> |           |        |                            |

| 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 |
| <b>Total Credit Hours</b>     | <b>14</b> |           |        |           |

| Semester Six                            | Cr        | Admit Req | Gen Ed | Notes       |
|---|-----------|-----------|--------|-------------|
| ECE 322L Electronics II                 | 4         |           |        | Spring only |
| ECE 344L Microprocessors                | 4         |           |        | Spring only |
| ECE 360L Electromagnetic Fields & Waves | 4         |           |        | Spring only |
| ECE 381 Intro to Electric Power Systems | 3         | *         |        | Spring only |
| <b>Total Credit Hours</b>               | <b>15</b> |           |        |             |

| Semester Seven                         | Cr        | Admit Req | Gen Ed | Notes                    |
|--|-----------|-----------|--------|--------------------------|
| ECE 419 Senior Design I                | 3         |           |        |                          |
| ECE 341 Intro to Communication Systems | 3         |           |        | Fall only                |
| ECE 345 Intro to Control Systems       | 3         |           |        | Cross-listed with ME 380 |
| ECE 300 or 400-level elective          | 3         |           |        | See Catalog for options  |
| ECON 2110/2120 Macro or Microeconomics | 3         |           | SB     |                          |
| <b>Total Credit Hours</b>              | <b>15</b> |           |        |                          |

| Semester Eight                | Cr        | Admit Req | Gen Ed | Notes                   |
|-------------------------------|-----------|-----------|--------|-------------------------|
| ECE 420 Senior Design II      | 3         |           |        |                         |
| ECE 300 or 400-level elective | 3         |           |        | See Catalog for options |
| ECE 400-level elective        | 3         |           |        | See Catalog for options |
| Diversity                     | 3         |           |        | See Catalog for options |
| Humanities Gen Ed Elective    | 3         |           | HUM    | See Catalog for options |
| <b>Total Credit Hours</b>     | <b>15</b> |           |        |                         |

**Degree Total 120**

Cells filled with grey represent courses that satisfy UNM General Education Curriculum

\* Denotes courses that qualify towards ECE departmental admission

Fall/Spring only ECE courses are subject to change. For pending changes, see [ece.unm.edu](http://ece.unm.edu)

A minium 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.

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| <a href="http://catalog.unm.edu">catalog.unm.edu</a>     | Comprehensive source of departmental, college, and university-wide information for all UNM programs and policies. Includes list of all courses and their pre-requisites. |
| <a href="http://ece.unm.edu">ece.unm.edu</a>             | Electrical & Computer Engineering home website. Department information including program, advisement, and course pre-reqs/Fall or Spring only details.                   |
| <a href="mailto:eceadvise@unm.edu">eceadvise@unm.edu</a> | 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 regularly.     |