

This 4 year roadmap lists all course requirements for the BS in Computer 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 Progamming 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 231L Intermediate Programming    | 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         | *         |        |                         |
| ECE 238L Computer Logic Design           | 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         | *         |        |                         |
| MATH 2531 Calculus III          | 4         |           |        |                         |
| MATH 327 Discrete Structures    | 3         |           |        |                         |
| ECE 206L Instrumentation        | 2         | *         |        |                         |
| Second Language Gen Ed Elective | 3         |           | LANG   | See Catalog for options |
| <b>Total Credit Hours</b>       | <b>15</b> |           |        |                         |

| Semester Five                       | Cr        | Admit Req | Gen Ed | Notes     |
|-------------------------------------|-----------|-----------|--------|-----------|
| ECE 314L Signals and Systems        | 4         |           |        |           |
| ECE 321L Electronics I              | 4         |           |        | Fall only |
| ECE 335 Integrated Software Systems | 3         |           |        | Fall only |
| ECE 340 Probabilistic Methods       | 3         |           |        |           |
| <b>Total Credit Hours</b>           | <b>14</b> |           |        |           |

| Semester Six                        | Cr        | Admit Req | Gen Ed | Notes                      |
|-------------------------------------|-----------|-----------|--------|----------------------------|
| ECE 331 Data Structure & Algorithms | 3         |           |        | Spring only                |
| ECE 344L Microprocessors            | 4         |           |        | Spring only                |
| ECE 440 Intro to Computer Networks  | 3         |           |        | Cross-listed with CS 485   |
| Basic Science with Laboratory       | 4         | *         |        | See curriculum for options |
| <b>Total Credit Hours</b>           | <b>14</b> |           |        |                            |

| Semester Seven                         | Cr        | Admit Req | Gen Ed | Notes                   |
|--|-----------|-----------|--------|-------------------------|
| ECE 419 Senior Design I                | 3         |           |        |                         |
| ECE 338 Intermediate Logic Design      | 3         |           |        | Fall only               |
| ECE 341 Intro to Communication Systems | 3         |           |        |                         |
| ECON 2110/2120 Macro or Microeconomics | 3         |           | SB     | Fall only               |
| Humanities Gen Ed Elective             | 3         |           | HUM    | See Catalog for options |
| <b>Total Credit Hours</b>              | <b>15</b> |           |        |                         |

| Semester Eight                     | Cr        | Admit Req | Gen Ed | Notes                    |
|------------------------------------|-----------|-----------|--------|--------------------------|
| ECE 420 Senior Design II           | 3         |           |        |                          |
| ECE 437 Computer Operating Systems | 3         |           |        | Cross-listed with CS 481 |
| ECE 400-level elective             | 3         |           |        | See Catalog for options  |
| Diversity                          | 3         |           |        | See Catalog for options  |
| Any elective                       | 3         |           |        |                          |
| <b>Total Credit Hours</b>          | <b>15</b> |           |        |                          |

**Degree Total 120**

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.

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

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| 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. |
| ece.unm.edu       | Electrical & Computer Engineering home website. Department information including program, advisement, and course pre-reqs/Fall or Spring only details.                   |
| 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 regularly.     |