**Sample Plan to Graduation for a BS in Electrical Engineering**

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|  | **Fall Semester** | **Spring Semester** |
| **Freshman Year** | First Year Seminar – 4 cr  English 101 – 3 cr  Math 140 – 4 cr  Engineering 104 – 3 cr  Gen. Ed. - 3 | English 102 – 3 cr  Math 141 – 4 cr  Physics 113 & 181 – 6 cr  Gen Ed- 3 cr |
| (17 credits) | (16 credits) |
| **Sophomore Year** | \* Engineering 231 & 271 – 4 cr  Engineering 211 – 3 cr  Math 242 – 4 cr  Physics 114 & 182 – 6 cr | \* Engineering 232 & 272 – 4 cr  \* Engineering 241 – 4 cr  Math 260 – 3 cr  ° CS 109 – 3- cr  Intermediate Seminar – 3 cr |
| (17 credits) | (17 credits) |
| **Junior Year †** | Engineering 365 – 4 cr  Engineering 321 – 3 cr  Engineering 331 – 3 cr  Math 270 – 3 cr  Gen Ed – 3 cr | Engineering 366 – 4 cr  Engineering 322 – 3  ECE Elective – 3 cr  Thematic Elective – 3 cr  Gen Ed – 3 cr |
| (16 credits) | (16 credits) |
| **Senior Year** | Engineering 491 – 3 cr  ECE Elective – 3 cr  ECE Elective – 3 cr  Thematic Elective – 3 cr  Gen Ed – 3 cr | Engineering 492 – 3 cr  ECE Elective – 3 cr  ECE or Thematic Elective – 3 cr  ECE or Thematic Elective – 3 cr  Gen Ed – 3 cr |
| (15 credits) | (15 credits) |

\* - Class may be offered only once a year.

\*- Students should select general education courses that fulfill multiple requirements.

° - Students interested in adding a Computer Science or Computer Engineering minor should take CS 110. Otherwise, take CS 109.

† - The Writing Proficiency Requirement (WPR) is recommended to be completed at 60-75 credits. Please consult the WPR website:

[www.umb.edu/academics/vpass/undergraduate\_studies/writing\_proficiency](http://www.umb.edu/academics/vpass/undergraduate_studies/writing_proficiency)

This course guide provides the detailed names of courses listed by number on the four-year plans. It is not a comprehensive list of courses for your major, or a substitute for an advising appointment! Consult with your faculty advisor when choosing courses, and check your degree audit regularly.

CS 109 – Computer Programming for Engineers OR CS 110 – Introduction to Computing

Engineering 104 – Introduction to Engineering

Engineering 187S & 188S – Engineering Science Gateway Seminar

Engineering 211 – Engineering Math

Engineering 231 & 271 – Circuit Analysis I Lecture & Laboratory

Engineering 232 & 272 – Circuit Analysis II Lecture & Laboratory

Engineering 241 – Digital Systems with Laboratory

Engineering 321 – Signals and Systems

Engineering 322 – Prob and Random Proc.

Engineering 331 – Fields and Waves

Engineering 365 – Electronics I with Lab

Engineering 366 – Electronics II with lab

Engineering 491 & 492 – Senior Design Project I & II

Math 140 – Calculus I

Math 141 – Calculus II

Math 242 – Multivariable and Vector Calculus

Math 270 – Differential Equations

Physics 113 & 181 – Fundamentals of Physics I Lecture & Laboratory

Physics 114 & 182 – Fundamentals of Physics II Lecture & Laboratory