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

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|  | **Fall Semester** | **Spring Semester** |
| **Freshman Year** | Engineering 104 – 3 cr  English 101 – 3 cr  Math 140 – 4 cr  First Year Seminar – 4 cr  Gen Ed- 3 cr | CS 110 – 4 cr  English 102 – 3 cr  Math 141 – 4 cr  Physics 113 & 181 – 6 cr |
| (17 credits) | (17 credits) |
| **Sophomore Year** | Engineering 211 – 3 cr  \* Engineering 231 & 271 – 4 cr  CS 210 – 4 cr  Physics 114 & 182 – 6 cr | \* Engineering 232 & 272 – 4 cr  \* CS 240 – 3 cr  MATH 242 – 4 cr  Intermediate Seminar – 3 cr  Gen Ed- 3 cr |
| (17 credits) | (17 credits) |
| **Junior Year †** | Engineering 241 – 4 cr  Engineering 246 – 3 cr  Engineering 321 – 3 cr  Engineering 365 – 3 cr  CS 220 – 3 cr | Engineering 341 – 3 cr  Engineering 322 – 3 cr  Engineering 346 – 3 cr  CS 310 – 3 cr  Math 260 – 3 cr |
| (16 credits) | (15 credits) |
| **Senior Year** | Engineering 491 – 3 cr  Engineering 342 – 3 cr  Gen Ed – 3 cr  Gen Ed– 3 cr  CE Elective (ENGIN 441, 442, 446) - cr | Engineering 492 – 3 cr  ECE/CS Elective – 3 cr  ECE/CS Elective – 3 cr  Engineering 448 – 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.

† - 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 110 – Introduction to Computing

CS 210 – Intermediate Computing with Data Structure

CS 220 – Applied Discrete Mathematics

CS 240 – Programming in C

CS 310 – Advanced Data Structures and Algorithms

Engineering 187S & 188S – Engineering Science Gateway Seminar

Engineering 104 – Introduction to Engineering

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 – Probability and Random Process

Engineering 341 – Advanced Digital Design

Engineering 346 – Microcontrollers

Engineering 365 – Electronics I with Lab

Engineering 446 – Computer Architecture Design

Engineering 491 & 492 – Senior Design Project I & II

Math 140 – Calculus I

Math 141 – Calculus II

Math 242 – Multivariable and Vector Calculus

Math 260 – Linear Algebra

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

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