# Computer Engineering - Communications - B.S.

## Degree Requirements

**Total Academic Credits:** 128
**Major Credits:** 97
**Min. Upper-Level Credits:** 45
**Min. Cumulative GPA:** 2.0

§ indicates Benchmark requirements
‡ indicates Gateway courses

## Curriculum Notes

- This sample plan assumes no AP/IB/CLEP or transfer credit, foreign language proficiency up to the 201 level and a math placement level of MATH 151
- All students must complete a credit-bearing English and Mathematics course in the first year of study
- Gateway Course Information: advising.coeit.umbc.edu/gateway-information/cmpe-gateway

## Year One

| Fall Semester | Credits | Spring Semester | Credits |
| --- | --- | --- | --- |
| CMSC 201 Computer Science I (see gateway for grade requirements) § ‡ | 4 | CMSC 202 Computer Science II | 4 |
| MATH 151 Calc. & Analytic Geom. I (MATH GEP; see gateway for grade requirements) § ‡ | 4 | MATH 152 Calculus and Analytic Geometry II § | 4 |
| PHYS 121 Introductory Physics I (S non-lab GEP; see gateway for grade requirements) § ‡ | 4 | CMPE 212 Principles of Digital Design (see gateway for grade requirements) § ‡ | 4 |
| ENGL GEP | 3 | ENES 101 Introduction to Engineering (see gateway for grade requirements) § ‡ | 3 |
| **Total** | **15** | **Total** | **15** |

## Year Two

| Fall Semester | Credits | Spring Semester | Credits |
|---|---|---|---|
| MATH 251 Multivariable Calculus | 4 | CMPE 306 Basic Circuit Theory (Lab GEP) | 4 |
| PHYS 122 Intro. Physics II (S non-lab GEP) § ‡ | 4 | MATH 225 Introduction to Differential Equations | 3 |
| CMSC 203 Discrete Structures | 3 | CMPE 310 Systems Design & Programming | 4 |
| AH GEP | 3 | CMSC 341 Data Structures | 3 |
| SS GEP | 3 | **Total** | **14** |
| **Total** | **17** | | |

## Year Three

| Fall Semester | Credits | Spring Semester | Credits |
|---|---|---|---|
| CMPE 314 Electronic Circuits | 4 | CMPE 320 Prob., Stat. & Random Processes | 3 |
| CMPE 311 C Programming & Embedded Systems | 3 | CMPE 330 Wave & Signal Transmission | 3 |
| CMPE 323 Signals & Systems | 4 | CMPE 349 Intro. to Professional Practice (WI) | 3 |
| MATH 221 Linear Algebra | 3 | AH GEP | 3 |
| Science Elective (Major Requirement) | 4 | C GEP | 3 |
| **Total** | **18** | **Total** | **15** |

## Year Four

| Fall Semester | Credits | Spring Semester | Credits |
|---|---|---|---|
| CMSC 411 Computer Architecture | 3 | CMSC 421 Principles of Operating Systems | 3 |
| CMPE 450 Capstone I § | 3 | CMPE 451 Capstone II | 3 |
| CMPE Elective List A | 3 | CMPE Elective List A/B | 3 |
| CMPE Elective List A | 3 | Foreign Language 201 | 4 |
| AH GEP | 3 | SS GEP | 3 |
| SS GEP | 3 | **Total** | **16** |
| **Total** | **18** | | |

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