

Computer Science - Cybersecurity - B.S.

Degree Requirements

Total Academic Credits: 120

Major Credits: 78

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/computer-science-gateway

Year One

| Fall Semester | Credits | Spring Semester | Credits |
|---|-----------|--|-----------|
| CMSC 201 Computer Science I (grade of B or better required) § ‡ | 4 | CMSC 202 Computer Science II (grade of B or better required) § ‡ | 4 |
| MATH 151 Calc. & Analytic Geom. I (MATH GEP) | 4 | CMSC 203 Discrete Structures (grade of C or better required) § ‡ | 3 |
| Foreign Language 201 | 4 | MATH 152 Calculus & Analytic Geometry II | 4 |
| ENGL GEP | 3 | AH GEP | 3 |
| | | SS GEP | 3 |
| Total | 15 | Total | 17 |

Year Two

| Fall Semester | Credits | Spring Semester | Credits |
|--|----------------|--|----------------|
| CMSC 331 Principles of Programming Language | 3 | CMSC 313 Computer Organization & Assembly Language Programming § | 3 |
| CMSC 341 Data Structures § | 3 | MATH 221 Introduction to Linear Algebra | 3 |
| Science Seq. I course (S non-lab GEP, see advisor) | 4 | Science Sequence II course (S non-lab GEP) | 4 |
| SS GEP | 3 | Science Lab (GEP, see advisor, credit varies) | 2 |
| Elective | 3. | SS GEP | 3 |
| Total | 16 | Total | 15 |

Year Three

| Fall Semester | Credits | Spring Semester | Credits |
|--|----------------|--|----------------|
| CMSC 304 Social & Ethical Issues in Information Technology (AH GEP, WI) | 3 | CMSC 426 Principles of Computer Security | 3 |
| CMSC 411 Computer Architecture | 3 | CMSC 4XX (select from CYBR list) | 3 |
| CMSC 421 Principles of Operating Systems | 3 | CMSC 4XX (select from CYBR list) | 3 |
| STAT 355 Intro. to Probability & Statistics for Scientists & Engineers § | 4 | AH GEP | 3 |
| | | C GEP | 3 |
| Total | 13 | Total | 15 |

Year Four

| Fall Semester | Credits | Spring Semester | Credits |
|--|----------------|---|----------------|
| CMSC 441 Design & Analysis of Algorithms | 3 | CMSC 4XX Elective | 3 |
| CMSC 447 Software Engineering I | 3 | CMSC 487: Introduction to Network Security | 3 |
| Upper-Level Elective | 3 | Electives (minimum of 8 credits, see advisor) | 8 |
| Elective | 3 | Total | 14 |
| Elective | 3 | | |
| Total | 15 | | |

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