

Undergraduate Program Name: Bachelor of Science in Computer Science with a concentration in Cyber and Network Security

Graduate Program Name: Master of Science in Cybersecurity

Pathway Description: Students in the Cyber and Network Security concentration of the BSCS program can follow this pathway to enroll in the MS Cyber program.

Course Pairs:

| Double Owl CS Scholars will NOT take three of the following CS courses (in the Cyber and Network Security Concentration): | In their place, Double Owl CS Scholars will take three of the following CS courses: |
|---|---|
| CS 3626: Cryptography | CYBR 7400: Introductions to Cryptography and Its Applications |
| CS 4612: Software Security | CYBR 7100: Secure Application Development |
| CS 4626: Computer and Network Security | CYBR 7200: Enterprise Infrastructure Security |

Possible Pathway of Study

Double counted courses are in RED

| Year 1 - Fall (credits) | Credits | Year 1 - Spring (credits) | Credits |
|---|----------|---|---------|
| ENGL 1101: Composition I (A-1) | 3 | ENGL 1102: Composition II (A-1) | 3 |
| MATH 1113: Precalculus (A-2) | 3 | MATH 1190: Calculus I (D-1) | 4 |
| CSE 1321: Programming Problem Solving I | 3 | CSE 1322: Programming Problem Solving II | 3 |
| CSE 1321L: Programming Problem Solving I Lab | 1 | CSE 1322L: Programming Problem Solving II Lab | 1 |
| POLS 1101: American Government (E-1) | 3 | General Education Course (E-2) | 3 |
| ECON 1000: Contemporary Economic Issues (B-1) | 2 | MATH 2345: Discrete Mathematics | 3 |
| TOTAL SEMESTER CREDITS | 15 | TOTAL SEMESTER CREDITS | 17 |
| Year 2 - Fall (credits) | Credits | Year 2 - Spring (credits) | Credits |
| MATH 2202: Calculus II | 4 | CS 3622: Fundamentals of Data Comm | 3 |
| CS 3305: Data Structures | 3 | CS 3503: Computer Organization & Arch | 3 |
| Science course I (D-2) | 3 | CS 3410: Intro to Database Systems | 3 |
| Science course I Lab (D-2) | 1 | TCOM 2010: Technical Writing | 3 |
| General Education Course (E-3) | 3 | Science course II (D-2) | 3 |
| | | Science course II Lab (D-2) | 1 |
| TOTAL SEMESTER CREDITS | 14 | TOTAL SEMESTER CREDITS | 16 |
| Apply to Cyber Gradua | ate Prog | gram and Start Graduate Work | |
| Year 3 - Fall (credits) | Credits | Year 3 - Spring (credits) | Credits |
| SWE 3313: Intro to Software Engineering | 3 | CS 4308: Concepts of Programming Lang. | 3 |
| CS 4306: Algorithm Analysis | 3 | CSE 3801: Professional Practices & Ethics | 2 |
| MATH 2332: Probability & Data Analysis | 3 | MATH 3260: Linear Algebra I | 3 |
| General Education Course (C-1) | 3 | General Education Course (E-4) | 3 |
| CNS Concentration Core I CS 3626: Cryptography Replaced by CYBR 7400: Intro to Cryptography and its Applications | 3 | CNS Concentration Core II CS 4612: Software Security Replaced by CYBR 7100: Secure Application Development | 3 |
| TOTAL SEMESTER CREDITS | 15 | TOTAL SEMESTER CREDITS | 14 |

| Year 4 - Fall (credits) | Credits | | Credits |
|---|-------------------|---|-------------------|
| CS 43065:Advanced Algorithms | 3 | CS 4850: Capstone | 3 |
| CS 4504: Distributed Computing | 3 | Concentration Elective or CS Elective | 3 |
| General Education Course (B-2) | 3 | General Education Course (C-2) | 3 |
| CNS Concentration Core III CS 4622: Computer Networks | 3 | CNS Concentration Core IV CS 4626: Computer and Network Security Replaced by CYBR 7200: Enterprise Infrastructure Security | 3 |
| Free Elective | 3 | Free Elective | 2 |
| | | | |
| TOTAL SEMESTER CREDITS | 15 | TOTAL SEMESTER CREDITS | 14 |
| TOTAL SEMESTER CREDITS Year 5- Fall (credits) | 15 Credits | TOTAL SEMESTER CREDITS Year 5 - Spring (credits) | 14 Credits |
| | | | |
| Year 5- Fall (credits) | Credits | Year 5 - Spring (credits) | Credits |
| Year 5- Fall (credits) CYBR 7000: Cyber Law, Policy, and Enforcement | Credits 3 | Year 5 - Spring (credits) CYBR 7050: Contingency Planning for Cybersecurity | Credits 3 |
| Year 5- Fall (credits)CYBR 7000: Cyber Law, Policy, and EnforcementCYBR 7220: Mobile and Cloud Security | Credits 3 3 | Year 5 - Spring (credits)CYBR 7050: Contingency Planning for CybersecurityCYBR 7240: Cyber Analytics and Intelligence | Credits 3 3 |