## 2018-2019 Old Dominion University Catalog

## **Bachelor of Science-Interdisciplinary Studies: Cyber Operations**

## This is an Interdisciplinary Studies Bachelor of Science degree with a Major in Cyber Operations, not an Engineering degree.

NOTE: This is a "sample" four year curriculum with a suggested ordering of courses. Students have the flexibility of re-ordering as needed.

| YEAR 1 - FRESHMAN (30 CREDITS)               |         |   |         |        |
|--|---------|---|---------|--------|
| FALL SEMESTER (16 credits)                   |         | SPRING SEMESTER (14 credits)                        | Credits | SUMMER |
| Lower Division Gen Ed Coursework:            |         | Lower Division Gen Ed Coursework:                   |         |        |
| Written Communication I (ENGL 110C)          | 3       | Written Communication II (ENGL 231C recommended)    | 3       |        |
| Oral Communication                           | 3       | Interpreting the Past                               | 3       |        |
| Info. Literacy and Research                  | 3       | Major Coursework:                                   |         |        |
| Human Behavior                               | 3       | CS 150  | 4       |        |
| MATH 211: Calculus I (Satisfies Mathematics) | 4       | MATH 212  | 4       |        |
| YEAR 2 - SOPHOMORE (31 CREDITS)              |         |   |         |        |
| FALL SEMESTER (15 credits)                   | Credits | SPRING SEMESTER (16 credits)                        | Credits | SUMMER |
| Lower Division Gen Ed Coursework:            |         | Lower Division Gen Ed Coursework:                   |         |        |
| Nature of Science I                          | 4       | Nature of Science II                                | 4       |        |
| Major Coursework:                            |         | Major Coursework:                                   |         |        |
| CS 252 Intorduction to Unix for Programers   | 1       | CS 361 Advanced Data Structures & Algorithms        | 3       |        |
| CS 250 Problem Solving & Programming II      | 4       | CS 270 Computer Architecture II                     | 3       |        |
| CS 170 Computer Architecture I               | 3       | CYSE/CRJS 406 Cyber Law                             | 3       |        |
| ECE 241 Fundamentals of Computer Eng         | 3       | ECE 304 Probability and Statistics                  | 3       |        |
| YEAR 3 -JUNIOR (30 CREDITS)                  |         |   |         |        |
| FALL SEMESTER (15 credits)                   | Credits | SPRING SEMESTER (15 credits)                        | Credits | SUMMER |
| Lower Division Gen Ed Coursework:            |         | Major Coursework:                                   |         |        |
| PHIL 355E (Philosophy and Ethics)            | 3       | CYSE 301 Introduction to Cybersecurity              | 3       |        |
| Major Coursework:                            | 3       | Approved Program Elective *                         | 3       |        |
| CYSE 368 Internship                          |         | CS 390 Introduction to Theoretical Computer Science | 3       |        |
| CS 381 Discrete Math                         | 3       | IDS 300W Interdisciplinary Theory & Concepts        | 3       |        |
| ECE 355 Intro Networks & Data Communication  | 3       | ECE 346 Microcontrollers                            | 3       |        |
| Approved Program Elective *                  | 3       |   |         |        |
| YEAR 4 - SENIOR (30 CREDITS)                 |         |   |         |        |
| FALL SEMESTER (15 credits)                   | Credits | SPRING SEMESTER (15 credits)                        | Credits | SUMMER |
| Lower Division Gen Ed Coursework:            |         | Lower Division Gen Ed Coursework:                   |         |        |
| Human Creativity                             | 3       | Literature  | 3       |        |
| Major Coursework:                            |         | Major Coursework:                                   |         |        |
| CS 465 Information Assurance                 | 3       | ECE 455 Network Engineering and Design              | 3       |        |
| ECE/ENMA/MSIM 416 Cyber-Defense              | 2       | FCF 410 Cuber Dhusical Sustana Coouvitu             | 2       |        |
| Fundamentals                                 | 3       | ECE 419 Cyber Physical Systems Security             | 3       |        |
| CS 471 Operating Systems Concepts            | 3       | IDS 493 e-Portfolio                                 | 3       |        |
| CS 464 Networked Systems Security            | 3       | CS 495 Topics: Reverse Software Engineering         | 3       |        |
|  |         |   |         |        |

<u>Please Note:</u> This curriculum sheet does not include the University's General Education Language and Culture requirement. \* Approved Program Electives include: CS 462, CS 476, CYSE 407, ECE 483, IT 417, MSIM 470. Consult your Advisor for additional recommendations