CMDA Major Requirements
Cryptography & Cybersecurity Option

Freshman
- BIT/CS/PSCI 2164 Foundations of Contemporary Security Environments
- CS 1064 Intro to Programming in Python
- CS 2064 Intermediate Prog in Python
- CS 2114 Software Design & Data Structures
- MATH 2534 Intro to Discrete Math
- MATH 2114 Intro to Linear Algebra
- CMDA 2005 Integrated Quantitative Science I
- CMDA 2006 Integrated Quantitative Science II

Sophomore
- MATH 1225 Calculus of a Single Variable I
- MATH 1226 Calculus of a Single Variable II
- MATH 2214 Intro to Differential Eqns
- MATH 2204 Intro to Multivariable Calc
- STAT 3006 Stat Methods II
- STAT 3005 Stat Methods I
- CMDA 3605 Math Modeling I
- CMDA 3606 Math Modeling II
- CMDA 3654 Intro Data Analytics & Visualization
- CMDA 4654 Intermediate Data Analytics & ML

Junior
- CMDA 3634 CS Foundations of CMDA
- CS 2114 Software Design & Data Structures or CS 3714 Mobile Software Development
- CS 3754 Cloud Software Development
- CMDA 4864 CMDA Capstone Project

Senior
- BIT/CS/PSCI 4164 Future of Security
- MATH 4175 Cryptography
- MATH 4176 Cryptography

+ 6 credits of restricted electives
- BIT 4624 (Cybersecurity Analytics)
- CS 4264 (Principles of Computer Security)
- FIN 4014 (Cyberlaw and Policy)
- MATH 3124 (Modern Algebra)
- MATH 3134 (Applied Combinatorics)
- PHYS 4254 (Quantum Information Tech)

CMDA 4864 (CMDA Capstone) requires the prerequisite of CMDA 3605, 3634, and 3654. Students are strongly encouraged to also take CMDA 3606 and 4654 before the CMDA Capstone.

https://www.science.vt.edu/academics/programs/cmda.html