Fall 2026 School of Computing and Data Science Electives

Applied Math

Technical Elective
Required:

- MATH4400 – Introduction to Abstract Algebra

Applied Math Electives:
- MATH2250 – Time Series
- MATH4050 – Machine Learning (required course for those on the 2025-26 Catalog)
- MATH4400 – Introduction to Abstract Algebra
- MGMT2750 – Integrated Financial Accounting
- Any 2000-Level courses in BIOE, BIOL, BMED, CHEM, CIVE, COMP, DATA, ELEC, ELMC, ENGR, ENVM, MECH, PHYS, or SCIN.

Non-Technical Elective
Any 4-credit courses for which the pre-requisites have been met, in the following subjects: ARCH, COMM, CONM, CSAS, ECON, ENGL, HIST, HUMN, HSSI, INDS, INTD, LITR, MGMT, MANF, PHIL, POLS, PSYC, SOCL, SURV

Computer Networking

NET Elective
- COMP2000 – Data Structures
- COMP2350 – Algorithms
- COMP3125 – Data Science Fundamentals
- COMP3350 – Programming Languages
- COMP3400 – Operating Systems
- COMP4960 – Software Engineering
- MATH4050 – Machine Learning
- Any course from the Advanced Security Elective List

Advanced Security Elective
- MGMT2650 – Cybersecurity Plans
- MGMT2800 – Cybersecurity Management

Computer Science

Computer Science Elective

- COMP1150 – Routing and Switching
- COMP2150 – Network Administration
- COMP2500 – Security Principles
- COMP3000 -- Applications of AI
- COMP3100 – System Administration
- COMP3125 – Data Science Fundamentals
- COMP3500 – Network Security
- COMP4000 -- AI Projects Design & Development
- COMP4760 -- Image Processing
- MATH4050 – Machine Learning

Cybersecurity

COMP Elective
- COMP1150 – Routing and Switching
- COMP2650 – Databases
- COMP3125 – Data Science Fundamentals
- COMP3350 – Programming Languages
- COMP4960 – Software Engineering
- MATH4050 – Machine Learning
- Any course from the Cybersecurity Elective List

Cybersecurity Elective
- MGMT2650 – Cybersecurity Plans
- MGMT2800 – Cybersecurity Management

Data Science

Data Science Elective
- COMP3000 – Applications of AI
- MATH2250 – Time Series
- MATH3700 – Operations Research
- MATH3900 – Numerical Analysis 1
- MATH4050 – Machine Learning
- MATH4400 – Introduction to Abstract Algebra
- MATH4900 – Partial Differential Equations
- Any 2000-Level courses in BIOE, BIOL, BMED, CHEM, CIVE, COMP, ELEC, ELMC, ENGR, ENVM, MECH, PHYS, SCIN

Information Technology

IT Infrastructure Concentration REQUIRED *Courses*
- COMP2150 – Network Administration
- COMP3100 – System Administration
- COMP3500 – Network Security

IT Infrastructure Concentration Elective
- All courses on the Computer Science elective list

IT Operations and Design REQUIRED Courses
- COMP2150 – Network Administration
- COMP3100 – System Administration
- COMP3125 – Data Science Fundamentals

IT Operations and Design Concentration Elective
- All courses on the Computer Science elective list

Lab-based Science Electives (BSCN, BCOS, BSCY, BSDS, BSIT)

- BIOL1000 – General Biology
- BIOL1100 – Cell and Molecular Biology*
- BIOL1750 – Anatomy & Physiology II*
- CHEM1000 – Chemistry of the Built Environment
- CHEM1100 – General Chemistry I
- CHEM1600 – General Chemistry II
- CHEM2500 – Organic Chemistry I
- PHYS1050 – Video-Game Physics
- PHYS1250 – Engineering Physics I
- PHYS1750 – Engineering Physics II
- SCIN1000 – Environmental Science
  *Only available if declaring Biology minor

Science Electives
- PHYS3000 – Computational Physics
- PHYS4700 – Electrodynamics
- The above lab-based courses

BSCN and BSIT may also take the following as lab-based Science elective

- PHYS1000 -College Physics I

Ethics Elective (BSCN, BCOS, BSCY, BSIT, BSDS)

- PHIL4401 – Engineering Ethics
- PHIL4501 – Ethics
- PHIL4525 – AI Ethics
- PHIL4550 – Bioethics
- PHIL4600 – Designing the Good Life
- PHIL4700 – Environmental Ethics
- COMM4300 – Media Ethics

Cybersecurity M.S.

Cybersecurity Elective
- COMP5725 – Applications of Cryptography
- COMP6100 – Secure Software Development

Data Science M.S.

Data Science Elective
- None

Computer Science M.S.

Computer Science Elective
- COMP7800 – Special Topics