Bachelor of Science in Data Science and AI (effective Fall 2024)

**Concentration Electives:**
Complete 12 credits either from one chosen concentration, or complete 12 credits from any of the concentrations.

**Computational and Big Data Analytics**
- CAI 4203 Introduction to Deep Learning
- CAP 4770 Introduction to Data Mining
- CEN 4083 Introduction to Cloud Computing
- COP 4534 Algorithm Techniques
- COP 4703 Information Storage and Retrieval Concepts
- COT 4431 Applied Parallel Computing

**Artificial Intelligence and Robotics**
- CAI 4203 Introduction to Deep Learning
- CAP 4453 Introduction to Robot Vision
- CAP 4506 Introduction to Game Theory
- CAP 4641 Natural Language Processing
- CAP 4770 Introduction to Data Mining
- CDA 4625 Introduction to Mobile Robotics

**Statistical Modeling**
- CAP 4770 Introduction to Data Mining
- CAP 4830 Fundamentals of Modeling & Simulations
- MAD 3301 Graph Theory
- MAD 3401 Numerical Analysis
- STA 3164 Statistical Methods II (Prereq: STA 3163)
- STA 4234 Introduction to Regression Analysis

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**Concentration Elective Courses**
The list of electives will be updated with acceptable elective courses from computing, math and stat programs.

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- **STA2023**: Prerequisite is High school algebra.

- **COT3100**: Prereq: MAC XXXX (any MAC course)
- Coreq: COP2047 or COP2210 or COP2250 or EEL2280

- **ENC3213 or ENC3249**: Professional & Tech Writing for Comp (GRW)
- **CIS3950**: Capstone I (1 credit) [Junior standing]
- **CIS4951**: Capstone II (2 credits) [Senior standing]

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- **STA2023**: Stat for Bus and Eco
- **STA3111**: Statistics I
- **STA3163**: Statistical Methods I I
- **MAC2312**: Calculus II (4 credits)
- **MAC2311**: Calculus I (4 credits)
- **MAD2104**: Discrete Math Pre: MAC1105
- **COT3100**: Discrete Structures
- **COP2047**: Python Programming I
- **CTS1500**: Emerging Topics in Digital Life
- **ENC3213 or ENC3249**: Professional & Tech Writing for Comp (GRW)
- **CGS3096**: Tech in the Global Arena (GL)
- **BSC2010/ BSC2010L**: Gen Biology I/ Lab (4 credits)
- **PHY2048/ PHY2048L**: Physics with Calculus I/ Lab (5 credits)
- **BSC2010**: General Biology Programs.