Bachelor of Science in Computer Science
Computer Science Track (effective 01/01/2021)

MAC 2311* Calculus I (4 credits)
MAC 2312 Calculus II (4 credits)
PHY 2048/2048L Physics w/Calculus I (5 credits)
MAD 2104* Discrete Math
MAD 2104* Discrete Math
COT 3100* Discrete Structures

PHY 2049/2049L Physics w/Calculus II (5 credits)
CDA 3102 Computer Architecture
COP 4610 Operating Systems (COP338 and CDA3102/CDA4101)

COP 2210 Programming I (4 credits)
COP 2210L Programming I (0 credit)
COP 3337 Programming II
COP 3530 Data Structures

CS 1920 Introduction To Computing (1 credit)
CIS 3950 Capstone I (1 credit) [Junior standing]
CIS 4951 Capstone II (2 credits) [Senior standing]
CEN 4010 Software Engineering I

MGF 4302-Math Logic (Prereq: MAC3512)

STA 3033 Probability & Statistics

§ Both COP 2210 and COP 2210L must be registered together with the same professor.

CS Electives (9 courses): Must take at least one course from each elective group (most electives are 3 credits).
Remaining six elective courses must be taken from these elective groups.

Foundations
- CAP 4506-Intro to Game Theory (Prereq: MAC2312)
- COP 4537-Algorithm Techniques (Prereq: COP3530)
- COP 4555-Programming Languages (Prereq: COP3530)
- COT 3510-Applied Linear Structures (Coreq: COT3100 or MAD2104)
- COT 3541-Logic for CS (Prereq: COP3337 & COT3100)
- COT 4521-Intro to Computational Geometry (Prereq: COP3530)
- MAD 3305-Graph Theory (Prereq: COP2210, MAD2104)
- MAD 3401-Mathematical Analysis (Prereq: COP2210, MAC2312)
- MAD 3512-Theory of Algorithms (Prereq: COP3530)
- MAD 4203-Combinatorics (Prereq: MAD2104, MAC2312)
- MGF 4302-Math Logic (Prereq: MAD3512)

Systems
- CAP 4453-Robot Vision (Prereq: COP3530, MAC2312)
- CDA 4625-Intro to Mobile Robotics (Prereq: COP3530, STA3033)
- CEN 4083-Cloud Computing (Prereq: CNT4713 and (CDA3102 or CDA4101))
- CIS 4731-Fund Blockchain Technologies (Prereq: COP3530)
- CNT 4713-Net Centric Computing (Prereq: COP338)
- COP 4520-Intro to Parallel Computing (Prereq: COP3530 and (CDA3102 or CDA4101 or EE4709))
- COP 4604-Advanced UNIX Programming (Prereq: COP338)
- COP 4710-Database Management (Prereq: COP337, Coreq: COP3530)
- COP 4751-Advanced Database Management (Prereq: COP4710)
- CTS 4408-Database Administration (Prereq: COP4710)
- COT 4431-Advanced Parallel Computing (Prereq: COP3530 and (CDA3102 or CDA4101 or EE4709))

Applications
- CAP 4052-Game Design & Dev (Prereq: (STA2023 or STA3033) and COP3530 and COP4104)
- CAP 4104-Human Cmptm Interaction (Prereq: COP3337)
- CAP 4612-Introduction to Machine Learning (Prereq: COP3530, STA3033)
- CAP 4630-Artificial Intelligence (Prereq: COP3530)
- CAP 4641-Nat Lang Processing (Prereq: COP3530)
- CAP 4710-Computer Graphics (Prereq: COP3337, MAC2312)
- CAP 4770-Intro to Data Mining (Prereq: COP3530, Coreq: COP4710)
- CAP 4830-Modeling & Simulations (Prereq: (STA2023 or STA3033) and COP3530)
- CEN 4021-Software Engineering II (Prereq: CEN4010)
- CEN 4072-Software Testing (Prereq: COP3530)
- COP 4226-Adv Windows Program (Prereq: COP3530)
- COP 4655-Mobile App Dev (Prereq: (CAP4104 and CEN4010) or (CEN3721 and COP4814))

* Prerequisites:
- COP2210: MAC1140 or higher level math course
- COT3100: Prereq: MAC XXXX and COP XXXX (any MAC course and any COP course)
Coreq:(COP2210 or COP2250 or EEL2280)
- ENC3249/ENC3213: UCC English requirements
- MAC2311: MAC1147
- MAD2104: MAC2105 or MGF1106
^ Natural Science electives: lab not needed unless required by offering dept.

A direction line indicates a prerequisite. The course above must be completed before the course below can be taken.
A diamond indicates a co-requisite. The course closer to the diamond may be taken at the same time as the co-requisite. The co-requisite is a prerequisite for any course that requires the course closer to the diamond.