Bachelor of Science in Computer Science
Computer Science Track (effective Spring 2022)

Prereqs:
- MAD 2104, MAC 2312

Prereqs:
- COP 4610

9 courses req:
- Prerequisites: required by offering dept.
- MAD 2104: MAC 1105 or MGF 1106
- ENC 3249/ENC 3213: UCC English requirements
- COT 3100: Prereq: MAC XXXX and COP XXXX

MAD 3101, COP 4338, COP 4604, COP 4610, COP 4630, COP 4655, COT 3100, COT 3510, COT 3541

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: MAC 2312)
- COP 4534-Algorithm Techniques (Prereq: COP 3530)
- COP 4555-Programming Languages (Prereq: COP 3530)
- COT 3510-Applied Linear Structures (Prereq: see syllabus; Coreq: COT 3100 or MAD 2104)
- COT 3541-Logic for CS (Prereq: COP 3337 & COT 3100)
- COT 4521-Intro to Computational Geometry (Prereq: COP 3530)
- MAD 3301-Graph Theory (Prereq: COP 2210 & COT 3100 or MAD 2104)
- MAD 3401-Numerical Analysis (Prereq: COP 2210, MAC 2212)
- MAD 3512-Theory of Algorithms (Prereq: COP 3530)
- MAD 4203-Combinatorics (Prereq: MAD 2104, MAC 2312)
- MIF 4302-Math Logic (Prereq: MAD 3512)

**Systems**
- CAP 4453-Robot Vision (Prereq: COP 3530, MAC 2312)
- CDA 4625-Intro to Mobile Robotics (Prereq: COP 3530, STA 3033)
- CEN 4083-Cloud Computing (Prereq: CNT 4713 and (CDA 3102 or CDA 4101))
- CIS 4731-Fund Blockchain Technologies (Prereq: COP 3530)
- CNT 4713-Net Centric Computing (Prereq: COP 4338)
- COP 4520-Intro to Parallel Computing (Prereq: COP 3530 and (CDA 3102 or CDA 4101 or EEL 4709))
- COP 4604-Advanced UNIX Programming (Prereq: COP 4610)
- COP 4710-Database Management (Prereq: COP 3337; Coreq: COP 3530)
- COP 4751-Advanced Database Management (Prereq: COP 4710)
- CTS 4408-Databases Administration (Prereq: COP 4710)
- COP 4431-Advanced Parallel Programming (Prereq: COP 3530 and (CDA 3102 or CDA 4101 or EEL 4709))

**Applications**
- CAP 4052-Game Design & Dev (Prereq: STA 2023 or STA 3033 and COP 3530 and CAP 4104)
- CAP 4104-Human Cmptr Interaction (Prereq: COP 3337)
- CAP 4612-Intro to Machine Learning (Prereq: COP 4530, STA 3033)
- CAP 4630-Artificial Intelligence (Prereq: COP 3530)
- CAP 4641-Nat Lang Processing (Prereq: COP 3530)
- CAP 4710-Computer Graphics (Prereq: COP 3337, MAC 2312)
- CAP 4770-Intro to Data Mining (Prereq: COP 3530, Coreq: COP 4710)
- CAP 4830-Modeling & Simulations (Prereq: STA 2023 or STA 3033 and COP 3530)
- CEN 4021-Software Engineering II (Prereq: CEN 4010)
- CEN 4072-Software Testing (Prereq: COP 3530)
- COP 4226-Adv Windows Program (Prereq: COP 3530)
- COP 4655-Mobile App Dev (Prereq: CAP 4104 and CEN 4010)

* Prerequisites:
  - COP 2210: MAC 1140 or higher level math course
  - COT 3100: Prereq: MAC XXXX and COP XXXX (any MAC course and any COP course)
  - Coreq: (COP 2210 or COP 2250 or EE 2280)
  - ENC 3249/ENC 3213: UCC English requirements
  - MAC 2311: MAC 1147
  - MAD 2104: MAC 1105 or MGF 1106

* 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 corequisite. The co-requisite is a prerequisite for any course that requires the course closer to the diamond.