



**CS Electives (7 courses):** Must take at least one course from Foundations group and one from Systems group. Remaining five elective courses must be taken from these elective groups (most electives are 3 credits).

**Foundations**

- CAP 4506-Intro to Game Theory (Prereq: MAC2312)
- COP 4534-Algorithm Techniques (Prereq: COP3530)
- COP 4555-Programming Languages (Prereq: COP3530)
- 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-Numerical Analysis (Prereq: COP2210, MAC2312)
- MAD 3512-Theory of Algorithms (Prereq: COP3530)
- MAD 4203-Combinatorics (Prereq: MAD2104, MAC2312)
- MHF 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: COP4338)
- COP 4520-Intro to Parallel Computing (Prereq: COP4338 and (CDA3102 or CDA4101))
- COP 4604-Advanced UNIX Programming (Prereq: COP4610)
- COP 4710-Database Management (Prereq: cop3337; Coreq: COP3530)
- COP 4722-Survey of Database Systems (Prereq: COP4710)
- COT 4431-Applied Parallel Computing (Prereq: COP3530 and CDA3102/CDA4101)
- CTS 4408-Database Administration (Prereq: COP4710)

**Applications**

- CAP 4104-Human Cmptr Interaction (Prereq: COP3337)
- CAP 4612-Intro 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, Co-req: COP4710)
- COP 4226-Adv Windows Program (Prereq: COP3530)
- COP 4655-Mobile App Dev (Prereq: (CAP4104 and CEN4010) or (CEN-3721 and COP4814))

\* Prerequisites:

- ENC3249/ENC3213: UCC English requirements
  - MAC2311: MAC1147
  - COT3100 & MAD2104: MAC1105
  - COP2210: MAC1140 or higher level math course
- ^ 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.