



CS Electives (6 credits): Must take at least one course from Foundations group.
Remaining elective credits must be taken from the elective groups below.

- Foundations**
- CAP 4506-Intro to Game Theory (Prereq: MAC2312)
 - COP 4534-Algorithm Techniques (Prereq: COP3530)
 - COT 3510-Applied Linear Structures (Prereq: see syllabus; Coreq: COT3100 or MAD2104)
 - COT 3541-Logic for CS (Prereq: COP3337 & COT3100)
 - COT 4521-Intro to Computational Geometry (Prereq: COP3530)
 - COT 4601-Fundamentals of Quantum Computing (Prereq: (COP3337 or COP3804) and COT3100)
 - MAD 3301-Graph Theory (Prereq: COP2210[#] & (COT3100 or 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 4203-Digital Forensics (Prereq: COP2047/2210/2250/EEL2880)
 - CIS 4731-Fund Blockchain Technologies (Prereq: COP3530)
 - CNT 4713-Net Centric Computing (Prereq: COP4338)
 - COP 4520-Intro to Parallel Computing (Prereq: COP3530 and (CDA3102 or CDA4101 or EEL4709))
 - COP 4604-Advanced UNIX Programming (Prereq: COP4610)
 - COP 4751-Advanced Database Management (Prereq: COP4710)
 - CTS 4408-Database Administration (Prereq: COP4710)
 - COT 4431-Applied Parallel Computing (Prereq: COP3530 and (CDA3102 or CDA4101 or EEL4709))

- Applications**
- CAI 4002-Artificial Intelligence (Prereq: COP3530)
 - CAI 4105-Introduction to Machine Learning (Prereq: STA3033[#])
 - CAI 4304-Nat Lang Processing (Prereq: COP3530)
 - CAP 4052-Game Design & Dev (Prereq: (STA2023 or STA3033) and COP3530 and CAP4104)
 - CAP 4104-Human Cmptr Interaction (Prereq: COP3337)
 - CAP 4710-Computer Graphics (Prereq: COP3337, MAC2312)
 - CAP 4770-Intro to Data Mining (Prereq: STA-2023/2122/3033/4322 and COP-3530/3465)
 - CAP 4830-Modeling & Simulations (Prereq: (STA2023 or STA3033) and COP3530)
 - COP 4226-Adv Windows Program (Prereq: COP3530)
 - COP 4655-Mobile App Dev (Prereq: CAP4104 and CEN4010)

- Career Readiness**
- CIS 3590-Internship Ready Software Development (Prereq: COP2047, Coreq: COP3337)
 - CIS 4257-Empowering Emerging Tech Talent (Prereq: COP2047)
 - CIS 4912-Research Experience for Undergraduates – REU (Prereq: Instructor permission)
 - CIS 4947-Career Readiness (Prereq: Instructor permission)

* Prerequisites:
 - COP2210: MAC1140 or higher level math course
 - COT3100: Prereq: MAC XXXX and COP XXXX (any MAC course and any COP course)
 Coreq:(COP2047/2210/2250 or EEL2280)
 - ENC3249/ENC3213: UCC English requirements
 - MAC2311: MAC1147
 - MAD2104: MAC1105 or MGF1106

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 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.