Bachelor of Science in Computer Science

Computer Science Track (effective Fall 2023)

MAC 2311* Calculus I (4 credits)

Natural^ Science Group 1 Elective
See Advisor

MAC 2312 Calculus II (4 credits)

Natural^ Science Group 2 Elective
See Advisor

MAD 2104* Discrete Math

OR

COT 3100* Discrete Structures

COP 2210 Programming I (4 credits)

CGS 1920 Introduction To Computing (1 credit)

ENC 3249* or ENC 3213* Professional & Technical Writing (GRW)

MAC 2312 Calculus II (4 credits)

CIS 3950 Capstone I (1 credit) [Junior standing]

CGS 3095 Technology in the Global Arena (GL)

CDA 3102 Computer Architecture

MAD 3401 (COT 3100 or MAD 2104)

COP 4338 Systems Programming

MAD 3301

COP 3530 Data Structures

COT 3541 Logic for CS

CIS 4551 Capstone II (2 credits) [Senior standing]

COP 4610 Operating Systems

CIS 4951 Introduction to Mobile Robotics

CEN 4010 Software Engineering I

STA 3033 Probability & Statistics

CDA 3102 Computer Architecture

CAP 4453 - Robot Vision (Pre req: COP 3530, MAD 2104)

COP 4338 Systems Programming

CDA 3102 Computer Architecture

COP 4610 Operating Systems

COT 4630 Artificial Intelligence (Pre req: COP 3530)

STA 3033 Probability & Statistics

CIS 4731 Fund Blockchain Technologies (Pre req: COP 3530)

CEN 4010 Software Engineering II (Pre req: CEN 4010)

CIS 4731 Fund Blockchain Technologies (Pre req: COP 3530)

CEN 4201 - Computer Programming I (Pre req: COP 3530)

CIS 4951 Introduction to Mobile Robotics (Pre req: COP 3530, STA 3033)

CEN 4010 Software Engineering I (Pre req: COP 3530, STA 3033)

CIS 4551 Capstone II (2 credits) [Senior standing]

CEN 4010 Software Engineering I (Pre req: COP 3530, STA 3033)

CIS 4713 Net Centric Computing

CEN 4201 - Computer Programming I (Pre req: COP 3530)

CEN 4010 Software Engineering I (Pre req: COP 3530, STA 3033)

CIS 4713 Net Centric Computing

CEN 4010 Software Engineering I (Pre req: COP 3530, STA 3033)

CIS 4713 Net Centric Computing

CEN 4010 Software Engineering I (Pre req: COP 3530, STA 3033)

CS Electives (7 courses): Must take at least one course from each elective group (most electives are 3 credits).

Remaining four elective courses must be taken from these elective groups.

 Foundations

CAP 4506 - Intro to Game Theory (Pre req: MAC 2312)

COP 4534 - Algorithm Techniques (Pre req: COP 3530)

COT 3510 - Applied Linear Structures (Pre req: MAC 2312)

COT 3541 - Logic for CS (Pre req: COP 3537 & COT 3100)

COT 4521 - Intro to Computational Geometry (Pre req: COP 3530)

COT 4601 - Fundamentals of Quantum Computing (Pre req: COP 3537 or COP 3804 and COT 3100)

COT 3301 - Graph Theory (Pre req: COP 2210 & (COT 3100 or MAD 2104))

MAD 3401 - Numerical Analysis (Pre req: COP 2210, MAC 2312)

MAD 3512 - Theory of Algorithms (Pre req: COP 3530)

MAD 4033 - Combinatorics (Pre req: MAD 2104, MAC 2312)

MHF 4302 - Math Logic (Pre req: MAD 3512)

 Systems

CIS 4203 - Digital Forensics (Pre req: COP 2210, COP 2250, EEL 2880)

CIS 4731 - Fund Blockchain Technologies (Pre req: COP 3530)

CIS 4731 - Fund Blockchain Technologies (Pre req: COP 3530)

CIS 4551 - Intro to Data Mining (Pre req: COP 3530, STA 3033)

CEN 4072 - Advanced UNIX Programming (Pre req: COP 3530)

CEN 4010 Software Engineering I (Pre req: COP 3530, STA 3033)

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Applications

CAP 4052 - Game Design & Dev (Pre req: STA 2023 or STA 3033 and COP 3530 and COP 4104)

CAP 4104 - Human Comp Inter (Pre req: COP 3337)

CAP 4612 - Introduction to Machine Learning (Pre req: COP 3530, STA 3033)

CAP 4630 - Artificial Intelligence (Pre req: COP 3530)

CAP 4641 - NGL Processing (Pre req: COP 3530)

CAP 4710 - Computer Graphics (Pre req: COP 3337, MAC 2312)

CAP 4710 - Computer Graphics (Pre req: COP 3337, MAC 2312)

CAP 4710 - Intro to Data Mining (Pre req: COP 3530, COP 4710)

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CAP 4830 - Modeling & Simulations (Pre req: STA 2023 or STA 3033 and COP 3530)

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CEN 4021 - Software Engineering II (Pre req: CEN 4010)

CEN 4021 - Software Engineering II (Pre req: CEN 4010)

CEN 4072 - Software Testing (Pre req: COP 3530)

CEN 4072 - Software Testing (Pre req: COP 3530)

COP 4226 - Adv Windows Program (Pre req: COP 3530)

COP 4226 - Adv Windows Program (Pre req: COP 3530)

COP 4655 - Mobile App Dev (Pre req: CAP 4104 and CEN 4010)

COP 4655 - Mobile App Dev (Pre req: CAP 4104 and CEN 4010)

* Prerequisites:
- COP 2210: MAC 1140 or higher level math course
- COP 3100: Pre req: MAC XXXX and COP XXXX (any MAC course and any COP course)
- Coreq: COP 2250 or COP 2250 or EEL 2280
- ENC 3249/ENC 3213: UCC English requirements
- MAC 2311: MAC 1147
- MAD 2104: MAC 1105 or MGF 1106
- KFSCIS approved Science electives with lab

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.