Computer Science Minimum Hours for graduation=120;  (January 2023)

1. Foundations in Computing – Take 15 Required Courses (12 CS + 3 EE courses) (49 credit hours)
   - CS 2400: Intro to Computer Science I (4.0)
   - CS 2401: Intro to Computer Science II (4.0)
   - CS 2653: Professional and Ethical Aspects of Computing (3.0)
   - CS 3200: Organization of Prog. Languages (3.0)
   - CS 3610: Data Structures (4.0)
   - CS 3560: Software Eng. Tools & Practices (3.0)
   - CS 4000: Introduction to Distributed, Parallel, and Web-Centric Computing (3.0)
   - CS 4040: Design & Analysis of Algorithms (3.0)
   - CS 4100: Intro to Formal Lang. & Compilers (3.0)
   - CS 4420: Operating Systems (3.0)
   - CS 4560: Software Design & Development I (3.0)
   - CS 4561: Software Design & Development II (3.0)
   - EE 1024: Intro to Computer Engineering (4.0)
   - EE 3954: Microprocessors/ Microcontrollers (4.0)
   - EE 3613: Computer Organization (3.0)

2. Technical Electives – Choose 3 Courses from a pool of electives – 9 Hours minimum
   (3 additional courses in the area of Computer Science or related areas of Electrical Engineering)
   - CS 4060: Computation Theory (3.0)
   - CS 4120: Parallel Computing I (3.0)
   - CS 4160: Problem Solving with Bioinformatics Tools
   - CS 4170: Programming for Bioinformatics (3.0)
   - CS 4201: Software Verification (3.0)
   - CS 4250: Interactive Computer Graphics (3.0)
   - CS 4350: Fundamental of Game Eng. design (3.0)
   - CS 4580: Operating Systems II (3.0)
   - CS 4620: Database Systems (3.0)
   - CS 4100: Intro to Formal Languages & Compilers (3.0)
   - CS 4170: Data Mining With Apps in the Life Sciences
   - CS 4440: Data Communications (3.0)
   - CS 4750: Internet Engineering (4.0)
   - CS 4770: Introduction to Computer Software Security for Eng
   - CS 4800: Artificial Intelligence (3.0)
   - EE 3613: Computer Organization (3.0)
   - EE 3713: Applied Prob. & Statistics for EE (3.0)
   - EE 4673: Embedded Systems (3.0)
   - EE 4683: Computer Architecture (3.0)
   - EE 4773: Foundations of Hardware Security

3. Mathematical Foundations – Take 5 Courses (18 hours of mathematics related to computing)
   - MATH 2301: Calculus I (4.0) (2AS)
   - MATH 2302: Calculus II (4.0) (2AS)
   - Choose one of two: [MATH 3200; Applied Linear Algebra (3.0)] OR [MATH 3210: Linear Algebra (3.0)]
   - EE 3713: Applied Prob. & Statistics for EE (3.0)
   - CS 3000: Introduction to Discrete Structures (4.0)

4. Additional Math and Basic Science Requirements: Take 15 hours of Basic Science and Mathematics
   - Take a Laboratory Science Sequence; 8 hours. [PHYS 2051/(2054+2055) + 2052] or [CHEM 1510 + CHEM 1520] or [BIOS1700+1705 + BIOS 1710+1715] or [PBIO1140 + PBIO1150]
   - Take 4 Extra hours of Laboratory Science from a different sequence; Choose from: [CHEM 1510] OR [PBIO 1140] OR [BIOS 1700+1705] OR [PHYS 2051] OR [PHYS(2054+2055)].
   - Take an extra Math .OR. Basic Science elective not taken already (3 hours minimum): Choose from: MATH; BIOS; PBIO; GEOL; ASTR; PHYS; CHEM; EE; (see approved list on DARS).

5. Additional Requirements: Take 14 hours of General Education + 15 hours of free electives
   - Take Six General Education Courses: (minimum 14 hours); (1E; 1J; 2CP; 2HL; 2FA; 2SS)
   - Take 15 hours of free electives: (includes ET 1500 Career Orientation for 0.5 credits).

6. IMPORTANT NOTES:
   a) You cannot use the same course to satisfy two program requirements at the same time (unless it is a Tier III or in Minors).
   b) Failing a Required course 3-Times (with F, WF, FS, or with < C in CS 2401, MATH 2301), forces you out of the program.
   c) To graduate: You need three GPAs > 2.0 (OU, ENT, Major) and at least 120 hours of credit.