

Computer Science Minimum Hours for graduation=120; (April-2019)

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 2650: Professional and Ethical Aspects of Computing (2.0)
- CS 3200: Organization of Progr. Languages (3.0)
- CS 3610: Data Structures (4.0)
- CS 3560: Software Engin. 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 4250: Interactive Computer Graphics (3.0)
- CS 4580: Operating Systems II (3.0)
- CS 4620: Database Systems (3.0)
- CS 4750: Internet Engineering (4.0)
- CS 4800: Artificial Intelligence (3.0)
- CS 4440: Data Communications (3.0)
- EE 4673: Embedded Systems (3.0)
- EE 4683: Computer Architecture (3.0)
- CS 4201: Software Verification (3.0)

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 minimum.** Choose from: [PHYS 2051 + 2052] .OR. [CHEM 1510 + 1520] .OR. [BIOS 1700 + 1705 + 1710 + 1715] .OR. [PBIO 1140 + 1150]
- **Take 4 Extra hours of Laboratory Science** from a different sequence; Choose from: [PHYS 2051] .OR. [CHEM 1510] .OR. [PBIO 1140] .OR. [BIOS 1700+1705]. If original sequence is in BIOS or PBIO you must choose from PHYS or CHEM.
- **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:

- You cannot use the same course** to satisfy two program requirements at the same time (unless it is a Tier III or in Minors).
- Failing a Required course 3-Times** (with F, WF, FS, or with < C in CS 2401, MATH 2301), forces you out of the program.
- If a Class A is a prerequisite to an advanced Class B** which you have already passed, you **cannot retake class A** to improve your grade. If you do, you will lose credit to both classes.
- To graduate:** You need three GPAs > 2.0 (OU, ENT, Major) and **at least 120 hours of credit.**