# Major Requirements

| Humanities required Courses | COM 251 Public Speaking (3)  
|                            | ENG 209 Writing for Business (3) or ENG 225 Writing for Science & Technology (3) |
| Mathematics required courses | Math 205 Calculus I (4)  
|                            | Math 206 Calculus II (4)  
|                            | Math 311 Introduction to Linear Algebra (3) |
| Natural Science required courses | Phys 170–170L General Physics I with Lab (5)  
|                                   | Phys 171–171L General Physics II with Lab (5)  
|                                   | Choose one from the following courses: (3–4)  
|                                   |   - ASTR 180 (3)  
|                                   |   - ASTR 181 (ASTR 180 is a pre-requisite) (3)  
|                                   |   - BIOL 125 (3)  
|                                   |   - BIOL 175–175L (4)  
|                                   |   - BIOL 176–176L (4)  
|                                   |   - BIOL 275–275L (4) → will count for GE Nat. Sci  
|                                   |   - CHEM 124 (3) → also take CHEM 124L(1) for GE Nat. Sci.  
|                                   |   - GEOL 111 (3) → also take GEOL 111L(1) for GE Nat. Sci.  
|                                   |   - MARE 201 (3) → also take MARE 201L(2) for GE Nat. Sci. |
| Computer Science required Core Courses | CS 141 Discrete Mathematics for Computer Science I (3)  
|                                        | CS 150 Introduction to Computer Science I (3)  
|                                        | CS 151 Introduction to Computer Science II (3)  
|                                        | CS 241 Discrete Mathematics for Computer Science II (3)  
|                                        | CS 266 Computer Organization and Assembly Language (3)  
|                                        | CS 321 Data Structures (3)  
|                                        | CS 407 Introduction to Numerical Analysis I (3)  
|                                        | CS 410 Elements of Computer Architecture (3)  
|                                        | CS 420 Database Internals (3)  
|                                        | CS 430 Operating Systems (3)  
|                                        | CS 450 Organization of Programming Languages (3)  
|                                        | CS 460 Software Engineering I (3)  
|                                        | CS 461 Software Engineering II (3)  
|                                        | CS 470 Theory of Computing (3)  
|                                        | CS 495 CS Professional Seminar (1)  
| Four Computer Science required elective courses | One course from the following:  
|                                               |   - CS 340 Graphical User Interfaces (3)  
|                                               |   - CS 350 Systems Programming (3)  
|                                               | Two courses from the following:  
|                                               |   - CS 421 Database System Design (3)  
|                                               |   - CS 431 Computer Networks & Data Communications (3)  
|                                               |   - CS 440 Artificial Intelligence (3)  
|                                               |   - CS 451 Compiler Theory (3)  
|                                               | One other 400-level CS course not previously taken (3) |

## Notes
1. A minimum of a 2.0 cumulative GPA is required.
2. A grade of “C” or better in each CS course required for the degree and in MATH 311.
3. 45 upper division (300–400-level) semester hours are required.
4. To earn a Bachelor of Science degree in Computer Science, students must fulfill the requirements for the major and meet all of the University's other baccalaureate degree requirements. (Please see the Baccalaureate Degree Requirements in this Catalog.)
5. Students should always check course prerequisites and the frequency with which courses are offered.
6. To ensure progress toward degree completion, **students are strongly encouraged to meet with an advisor each semester before registering** and to use the helpful planning aids provided by the Department at [cs.uhh.hawaii.edu/cs/](http://cs.uhh.hawaii.edu/cs/).

This program sheet was prepared to provide information and does not constitute a contract. See your specific year course catalog requirements. You are encouraged to meet regularly with your assigned advisor in your major.