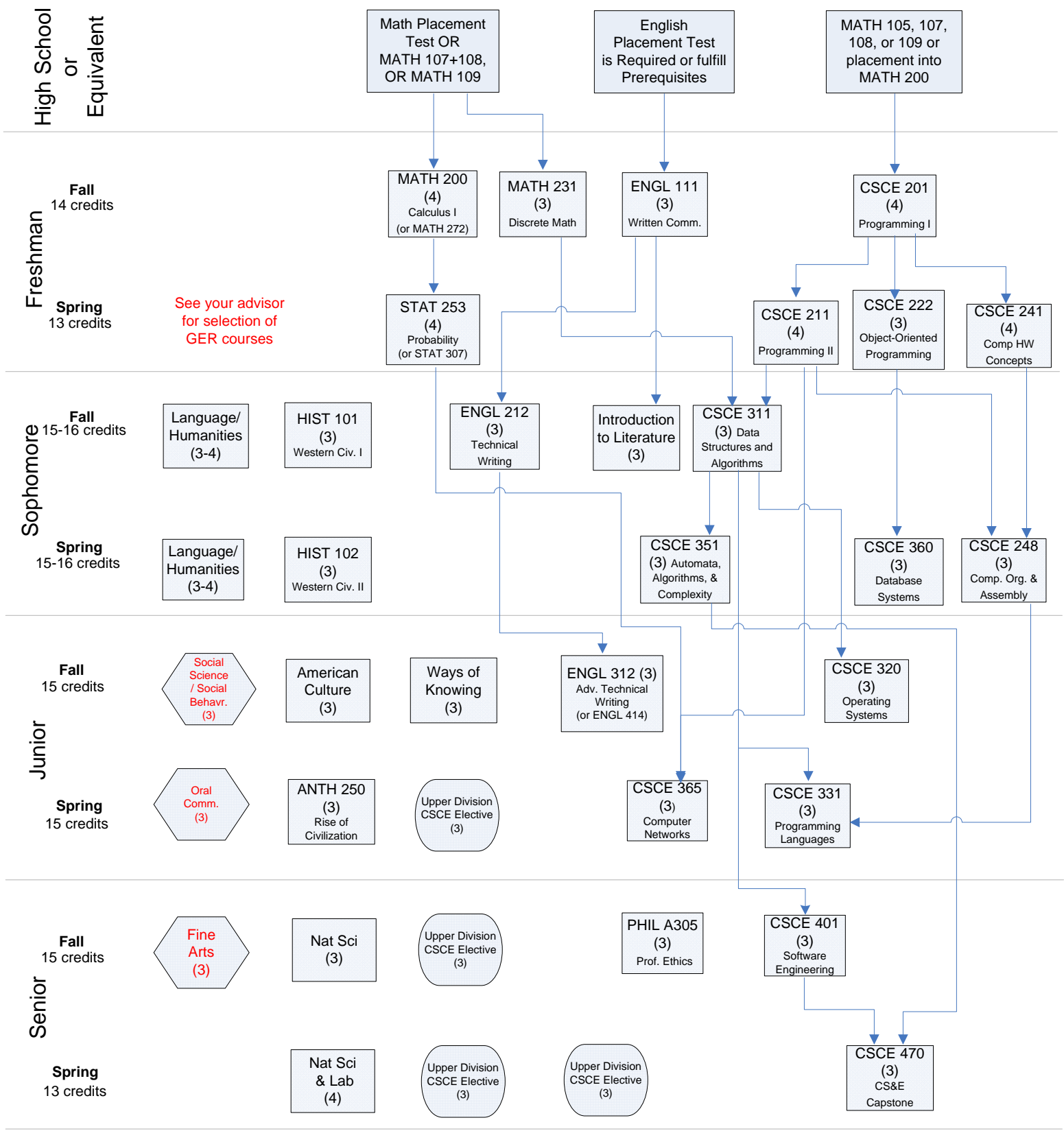


# UAA Bachelor of Arts in Computer Science Recommended Course Sequence & Prerequisites Flowchart

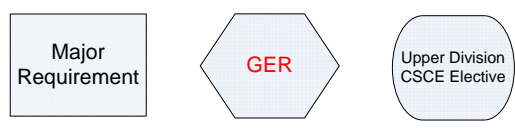
2014/2015



See your advisor for selection of GER courses

120 Total Credits Required for the degree, of which 42 must be upper division.

**Key:**



See your advisor for list of Upper Division CS Electives and Prerequisites

## Bachelor of Arts in Computer Science

Catalog Year 2014-2015

### Fall Year 1 (14 credits)

|                  |                               |   |
|------------------|-------------------------------|---|
| CSCE A201        | Computer Programming I (Java) | 4 |
| ENGL A111        | Methods of Written Comm.      | 3 |
| MATH A200 or 272 | Calculus I                    | 4 |
| MATH A231        | Intro to Discrete Math        | 3 |

### Fall Year 2 (15-16 credits)

|                                       |                              |     |
|---------------------------------------|------------------------------|-----|
| CSCE A311                             | Data Structures & Algorithms | 3   |
| ENGL A212                             | Technical Writing            | 3   |
| HIST A101                             | Western Civilization I       | 3   |
| ENGL A121, 301, 302, 305, 306, or 307 |                              | 3   |
| Humanities/Foreign Language           |                              | 3-4 |

### Fall Year 3 (15 credits)

|   |                            |   |
|---|----------------------------|---|
| ENGL A312 or 414                          | Advanced Technical Writing | 3 |
| CSCE A320                                 | Operating Systems          | 3 |
| ENGL A120, PHIL A101, A201, A301, or A421 |                            | 3 |
| HIST A131, A132, or PS A101               |                            | 3 |
| Social Sciences GER/Social Behavior       |                            | 3 |

### Fall Year 4 (15 credits)

|                                |                      |   |
|--------------------------------|----------------------|---|
| CSCE A401                      | Software Engineering | 3 |
| PHIL A305                      | Professional Ethics  | 3 |
| **Upper Division CSCE Elective |                      | 3 |
| Fine Arts GER                  |                      | 3 |
| Natural Science GER            |                      | 3 |

A total of 120 credits is required for this degree, 42 of which must be upper division. Any additional credits to reach 120 total must be earned at the 100 level or higher.

\*\*Students completing the Bachelor of Arts need an additional 12 upper division credits in CSCE, Mathematics (excluding MATH A420 and MATH A495), or Statistics. Nine of these credits must be in courses with a CSCE prefix. A maximum of 3 credits of CSCE A395, a maximum of 3 credits of CSCE A495, and a maximum of 6 credits of CSCE A498 may be applied to degree requirements.

### Spring Year 1 (15 credits)

|                  |                             |   |
|------------------|-----------------------------|---|
| CSCE A222        | Object Oriented Programming | 3 |
| CSCE A211        | Computer Programming II     | 4 |
| CSCE A241        | Computer Hardware Concepts  | 4 |
| STAT A307 or 253 | Probability                 | 4 |

### Spring Year 2 (15-16 credits)

|                             |                                    |     |
|-----------------------------|------------------------------------|-----|
| CSCE A351                   | Automata, Algorithms, & Complexity | 3   |
| CSCE A248                   | Computer Org. & Assembly           | 3   |
| CSCE A360                   | Database Systems                   | 3   |
| HIST A102                   | Western Civilization II            | 3   |
| Humanities/Foreign Language |                                    | 3-4 |

### Spring Year 3 (15 credits)

|                                |                               |   |
|--------------------------------|-------------------------------|---|
| CSCE A331                      | Programming Language Concepts | 3 |
| CSCE A365                      | Computer Networks             | 3 |
| ANTH A250                      | The Rise of Civilization      | 3 |
| **Upper Division CSCE Elective |                               | 3 |
| COMM A111, 235, 237, or 241    |                               | 3 |

### Spring Year 4 (13 credits)

|                                |                       |   |
|--------------------------------|-----------------------|---|
| CSCE A470                      | CS&E Capstone Project | 3 |
| **Upper Division CSCE Elective |                       | 3 |
| **Upper Division CSCE Elective |                       | 3 |
| Natural Science GER            |                       | 4 |

## Upper Division Computer Science Electives

| <u>Course</u> | <u>Number</u> | <u>Title</u>            | <u>Course</u> | <u>Number</u> | <u>Title</u>                        |
|---------------|---------------|-------------------------|---------------|---------------|-------------------------------------|
| CSCE          | A302          | Design Patterns         | CSCE          | A446          | Digital Media & Interactive Systems |
| CSCE          | A305          | Android Programming     | CSCE          | A448          | Computer Architecture               |
| CSCE          | A385          | Computer Graphics       | CSCE          | A450          | Robotics                            |
| CSCE          | A395          | Internship in Computing | CSCE          | A460          | Advanced Database Systems           |
| CSCE          | A411          | Artificial Intelligence | CSCE          | A462          | Data Mining                         |
| CSCE          | A412          | Evolutionary Computing  | CSCE          | A485          | Computer & Machine Vision           |
| CSCE          | A415          | Machine Learning        | CSCE          | A490          | Topics in Computer Science          |
| CSCE          | A431          | Compilers               | CSCE          | A498          | Individual Research                 |