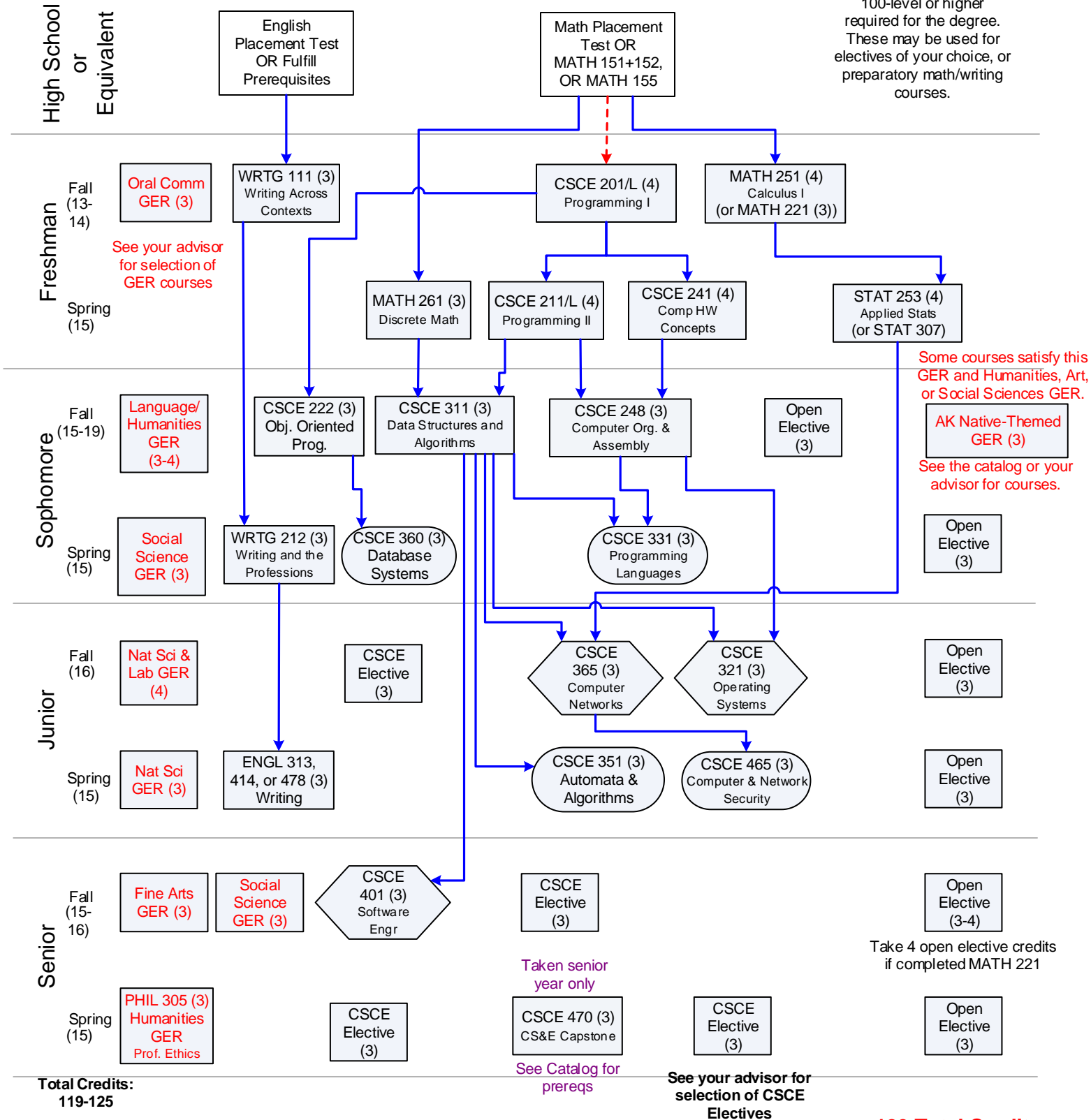# UAA Bachelor of Arts in Computer Science
Recommended Course Sequence & Prerequisites Flowchart

2018/2019

120 total credits at the 100-level or higher required for the degree. These may be used for electives of your choice, or preparatory math/writing courses.

High School or Equivalent

English Placement Test OR Fulfill Prerequisites

Math Placement Test OR MATH 151+152, OR MATH 155

Freshman (13-14) Fall

Oral Comm GER (3)

See your advisor for selection of GER courses

WRTG 111 (3) Writing Across Contexts

CSCE 201/L (4) Programming I

MATH 251 (4) Calculus I (or MATH 221 (3))

Spring (15)

MATH 261 (3) Discrete Math

CSCE 211/L (4) Programming II

CSCE 241 (4) Comp HW Concepts

STAT 253 (4) Applied Stats (or STAT 307)

Sophomore (15-19) Fall

Language/ Humanities GER (3-4)

CSCE 222 (3) Obj. Oriented Prog.

CSCE 311 (3) Data Structures and Algorithms

CSCE 248 (3) Computer Org. & Assembly

Open Elective (3)

Some courses satisfy this GER and Humanities, Art, or Social Sciences GER.

AK Native-Themed GER (3)

See the catalog or your advisor for courses.

Spring (15)

Social Science GER (3)

WRTG 212 (3) Writing and the Professions

CSCE 360 (3) Database Systems

CSCE 331 (3) Programming Languages

Open Elective (3)

Junior (16) Fall

Nat Sci & Lab GER (4)

CSCE Elective (3)

CSCE 365 (3) Computer Networks

CSCE 321 (3) Operating Systems

Open Elective (3)

Spring (15)

Nat Sci GER (3)

ENGL 313, 414, or 478 (3) Writing

CSCE 351 (3) Automata & Algorithms

CSCE 465 (3) Computer & Network Security

Open Elective (3)

Senior (15-16) Fall

Fine Arts GER (3)

Social Science GER (3)

CSCE 401 (3) Software Engr

CSCE Elective (3)

Open Elective (3-4)

Take 4 open elective credits if completed MATH 221

Spring (15)

PHIL 305 (3) Humanities GER Prof. Ethics

CSCE Elective (3)

Taken senior year only

CSCE 470 (3) CS&E Capstone

See Catalog for prereqs

CSCE Elective (3)

Open Elective (3)

See your advisor for selection of CSCE Electives

Total Credits: 119-125

120 Total Credits Required for the Degree.
Credits must be at the 100-level or higher.

Key:

Prerequisite →

Prerequisite or Concurrent ⇢

Offered EVERY Semester

Offered FALL only

Offered SPRING only

Find more information on the web at http://www.uaa.alaska.edu/collegeofengineering

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Bachelor of Arts in Computer Science   Catalog Year 2018-2019

Fall Year 1 (13-14 credits)

CSCE A201	Computer Programming I (Java)	4
WRTG A111	Writing Across Contexts	3
MATH A251 or 221	Calculus I	3-4
Communications GER		3

Spring Year 1 (15 credits)

CSCE A211	Computer Programming II	4
CSCE A241	Computer Hardware Concepts	4
MATH A261	Discrete Math	**3**
STAT A253 or 307	Probability	4

Fall Year 2 (15-16 credits)

CSCE A222	Object-Oriented Programming	3
CSCE A248	Computer Org & Assembly	3
CSCE A311	Data Structures & Algorithms	3
Open elective		3
Humanities/Foreign Language/AK Native-Themed GER		3-4

Spring Year 2 (15 credits)

CSCE A331	Programming Languages	3
CSCE A360	Database Systems	3
WRTG A212	Writing and the Professions	3
Open elective		3
Social Science GER		3

Fall Year 3 (16 credits)

CSCE A321	Operating Systems	3
CSCE A365	Computer Networks	3
**Upper Division CSCE Elective		3
Open elective		3
Natural Science GER + Lab		4

Spring Year 3 (15 credits)

CSCE A351	Automata & Algorithms	3
CSCE A465	Computer & Network Security	3
ENGL A313 or 414 or 478	Professional/Research/Public Writing	3
Open elective		3
Natural Science GER		3

Fall Year 4 (15-16 credits)

CSCE A401	Software Engineering	3
**Upper Division CSCE Elective		3
Open elective		3-4
Fine Arts GER		3
Social Science GER		3

Spring Year 4 (15 credits)

CSCE A470	CS&E Capstone Project	3
PHIL A305	Professional Ethics	3
**Upper Division CSCE Elective		3
**Upper Division CSCE Elective		3
Open elective		3

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

**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.

Upper Division Computer Science Electives

Course	Number	Title	Course	Number	Title
CSCE	A302	Object-Oriented Programming II	CSCE	A415	Machine Learning
CSCE	A305	Android Programming	CSCE	A448	Computer Architecture
CSCE	A342	Digital Circuits Design	CSCE	A462	Data Mining
CSCE	A385	Computer Graphics	CSCE	A490	Topics in Computer Science
CSCE	A395	Internship in Computing	CSCE	A495	Computing Internship Project
CSCE	A405	Artificial Intelligence	CSCE	A498	Individual Research
CSCE	A412	Evolutionary Computing			