2018 COMPUTER SCIENCE FLOW CHART

This flow chart is only a guide. Please refer to your advisor for questions.

**Requirements**

**World Language**
- 1 year at college level or
- 3 years at high school

**Arts and Humanities – 12 Cr.**
1. Phil 343 – 3 Cr
2. Select additional 9 credits from LAS approved list on website and degree audit.

**Social Sciences – 9 Cr**
Select credits from the LAS approved list on website and degree audit.

3 cr. - U.S. Diversity
3 cr. - International Perspective
Select credits from the University approved list on website and degree audit.

**Science Sequence Options**
BIOL 211 & 212 + Labs OR
BIOL 255 & 256 + Labs OR
CHEM 177 & 178 + Labs OR
GEOL 300 & 102 + Labs OR
PHYS 221 & 232 & 234 & 236 OR
PHYS 241 & 242 & 246

**Com S 300 - 6 Credits**
300 Level options
Com S 319, 336, 362, 363

**Com S 400 - 6 Credits**
400 Level options

Com S 414 is not an elective option

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**CLASS BASED ON ALEKS Math Assessment**

**MATH 140 - 3 cr., College Algebra**

**MATH 143 - 4 cr., Calculus Prep**

**Com S 127**
Introduction to Computer Programming
Python (Elective Course - 4 Cr)

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**MATH 165**
Calculus I

4 Cr

C or Better

**MATH 166**
Calculus II

4 Cr

C or Better

**COM S 228**
Introduction to Data Structures, JAVA
(Pre Req placement into Math 143 or higher)
3 Cr

C or Better

**COM S 231**
Introduction to Computer Architecture & Machine level programming.
(Pre Req - C or B in Com S 228 and Math 165; Com S 230 or Com E 310, Engl 150)
3 Cr

C or Better

**COM S 331**
Theory of Computing (Pre Req C or B in Com S 228, Math 166 and in Com S 230 or Com E 310, Engl 250)
3 Cr

C or Better

**COM S 332**
Object Oriented Programming JAVA
(Pre Req placement into Math 143 or higher)
4 Cr

C or Better

**ENGL 150**
If English ACT 24 or higher, placement into English 250.
3 Cr

**ENGL 250**
(Pre Req ENGL 150 or exempt from ENGL 150)
3 Cr

**Social Science**

Elective or World Language 101
3 Cr

**Elective or World Language 102**

3 Cr

**Arts & Humanities**

**Social Science**

Elective or World Language 101
3 Cr

**Elective or World Language 102**

3 Cr

**Arts & Humanities**

**Elective**

**Elective**

**Elective**

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**Statistics Option**

(choose one)

3 Cr

C or Better

**COMS 346**
Principles of Programming Languages. (Pre Req C or B in 228 and Math 165; Com S 230 or Com E 310)
3 Cr

C or Better

**COMS 300**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 301**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 302**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 303**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 304**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 305**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 306**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 307**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 308**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 309**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 310**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 311**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 312**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 313**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 314**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 315**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

**COMS 316**
(Choose Pre Req requirements) 300 Level course from approved options.
3 Cr

C or Better

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**Graduation Requirement**

8 credits from Computer Science must be at the 300+ level courses with a grade of “C” or better from ISU

Transfer Students must have at least 15.0 Crs at 300+ level or above in Com S courses while in residence at ISU

Last 32 Credits must be taken at Iowa State University

Adviser can waive 6 of the last 32 credits taken at Iowa State.

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**Elective courses** Any course that is not remedial (can use minor or second major courses) - only need to meet 120 Cr total.

**U.S. Diversity, International Perspective, Arts & Humanities and Social Sciences approved course lists can be found on your degree audit, click on link for that particular requirement on your degree audit.