Iowa State Computer Science Flowchart

(Minimum of 120 credits)

Class based on ALEKS Math Assessment
MATH 140 - 3 cr
College Algebra
MATH 143 - 4 cr
Calculus Prep

MATH 165
Calculus I
4 cr
C- or better

MATH 166
Calculus II
4 cr
C- or better

COMS 101
Orientation
R cr
C- or better

COMS 127
Introduction to Programming
for Problem Solving
(Elective Course)
4 cr
C- or better

COMS 227
Introduction to Object-Oriented Programming
JAVA Language
(Pre-Req placement into Math 143 or higher)
4 cr
C- or better

Social Science
3 cr **

ENGL 150
(If English ACT 24 or higher placement into English 250)
3 cr
C- or better prior 2017 catalog

ENGL 250
(Pre-Req ENGL 150 or exempt from ENGL 150)
3 cr
C- or better

Social Science
3 cr **

ENGL 160
Orientation
1 cr
C- or better

Elective
World Language
3/4 cr *

SCIENCE SEQUENCE

BIOL 211 & Lab
4 cr &
BIOL 212 & Lab
4 cr

OR

CHEM 177 & Lab
5 cr &
CHEM 178 & Lab
4 cr

OR

PHYS 221 & Lab
5 cr &
PHYS 222 & Lab
5 cr

MATH Math Option
(Choose One)
207, 265, 266, 267,
304, 314, 317
3/4 cr
C- or better

COMS 203
Careers in Computer Science
R cr
C or ComS 227 is a required course to graduate in Computer Science
C- or better

COMS 228
Introduction to Data Structures
JAVA Language
(Pre-Req C- in Math 165)
3 cr
C- or better

COMS 327
Advanced Programming Techniques
C++ Language
(Pre-Req C- in Math 165 and Com S 228)
3 cr
C- or better

COMS 331
Design & Analysis of Algorithms
(Pre-Req C- in ComS 228; Math 166, ComS 230 or CEE 310; EngI 250)
3 cr
C- or better

COMS 362
Object-Oriented Analysis & Design
(Pre-Req Com S 228; Math 250)
3 cr
C- or better

STATISTICS
Option
(Choose One)
305, 330, 341
3 cr
C- or better

COMS 309
Software Development Practices
(Pre-Req C- in ComS 228 and Math 165)
3 cr
C- or better

COMS 400
Principles of Programming Languages
(Pre-Req C- in 228 and Math 165, Com S 230 or CPE 310)
3 cr
C- or better

COMS 400
(Check Pre-requisite requirements)
400 level course from approved options
3 cr
C- or better

COMS 400
(Pre-Req C- in ComS 228; Math 165, Com S 230 or CPE 310)
3 cr
C- or better

COMS 432
Introduction to Operating Systems
(Pre Req: Com S 321, 327, EngI 250)
3 cr
C- or better

Math Placement into English
(Click on link for that particular requirement on your degree audit)

International Perspective in Math
3 cr
C- or better

Elective
3 cr or above

Elective
3 cr or above

Digital Logic
4 cr
C- or better

COMS 311
Theory of Computing
(Pre-Req C- in ComS 228; Math 166, and Com S 230 or CPE 310; EngI 250)
3 cr
C- or better

COMS 362
Object-Oriented Analysis & Design
(Pre-Req Com S 228; Math 250)
3 cr
C- or better

SPCM 212
Public Speaking
3 cr
C- or better

ENGL 302/
305/309/314
3 cr
C- or better

ENGL 431
or
300 Level Elective
3 cr *

ENGL 433
or
300 Level Elective
3 cr *

300 Level Elective
A minimum of 45 credits numbered 300 or above is required for graduation
3 cr *

Computer Science transfer courses with a grade of "C" or better will be eligible for departmental review.

Please be aware that if you transfer in credits which fulfill all your general education requirements (right two columns) there may be semesters where you will not be a full time student. You may need a minor to meet full time status (12 credits or more.) Minor information can be found at:
http://catalog.iastate.edu/collegescurricula/#minorstext

Requirements

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

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

Social Sciences - 9 Cr
Select credits form the LAS approved list on website and degree audit

** 3 cr. - U.S. Diversity
** 3 cr. - Internatl. Persp.

Science - 13 Cr
Science Sequence:
BIOL 211/212 + labs OR CHEM 177/178 + labs OR
PHYS 221/222 + labs

& Additional Science Reqmt:
ANTHR 202, ANTHR 307, BBMB 221, BIOL 204, BIOL 258, BIOL 312, BIOL 355, CHEM 163-231, ENT 370, ENV S 324, FS HN 167, GEN S23, GEN S21L, GEN S20, GEO 100, GEO 100-111, GEO 102, GEO 201, GEO 451, MAT E25 & 215L, MTEOR 206, MTEOR 301, PSYCH 310, PHYS 221 or HIGHER

COMS 400 - 6 credits

400 Level Options
Select 2 courses, including at least one from Group 1 and an additional course from Group 1 or 2.
1) Com S 402 (if 3 cr. or more), 409, 410, 417, 425, 430, 437, 453, 461, 487, SE/CEE 416

# 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 six of the last 32 credits taken at Iowa State.

* Elective Courses – Any course that is not remedial (can use minor or second major courses)

** 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

VIEW THE IOWA STATE EQUIVALENCY GUIDE AT www.iastate.edu/