

Iowa State Computer Science Flowchart (120 credits)

COURSES HIGHLIGHTED IN YELLOW MAY BE TRANSFERABLE TO THE COMPUTER SCIENCE MAJOR AT IOWA STATE UNIVERSITY

Transfer courses with a grade of "C" or better are accepted
 Please be sure to view the Iowa State Equivalency Guide at <http://www.admissions.iastate.edu/equiv/index.php>

ALEKS Math Assessmt
MATH 140 - 3 cr
 College Algebra
MATH 143 - 4 cr
 Calculus Prep

MATH 165
 Calculus I
 4 cr

Social Science and/or Arts & Humanities
 3 cr **

COMS 127
COMS 227
 Introduction to Object-Oriented Programming
 4 cr

COMS 101
 Orientation
 R cr

ENGL 150
 Critical Thinking & Communication
 (If English ACT 24 or higher placement into English 250)
 3 cr

MATH 166
 Calculus II
 4 cr

COMS 203
 Careers in Computer Science
 R cr
 ComS 203 is a required course to graduate in Computer Science

COMS 228
 Introduction to Data Structures
 JAVA Language
 (Pre-Req C 227, CR/E Math 165)
 3 cr

Social Science and/or Arts & Humanities
 3 cr **

LIB 160
 Orientation
 1 cr

COMS 230
 (previously ComS 330)
 Discrete Computational Structures
 (Pre-Req Math 165, C in ComS 227, Engl 150)
 3 cr

Arts and Humanities
 3 cr **

COMS 327
 (previously ComS 229)
 Advanced Programming Techniques
 C++ Language
 (Pre-Req ComS 228, CR/E Math 166)
 3 cr

CprE 281
 Digital Logic
 4 cr
 Sophomore Classification

ENGL 250
 WOVE Composition
 (Pre-Req ENGL150 or exempt from ENGL150)
 3 cr

COMS 311
 Design & Analysis of Algorithms
 (Pre-Req Math 166, C in 228, ComS 230 or CprE 310, Engl 150)
 3 cr

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

COMS 321
 Introduction to Computer Architecture & Machine-Level Programming
 (Pre-Req C in ComS 228, CprE 281, Engl 250)
 3 cr

Social Science
 3 cr **

Elective or Foreign Language 101
 Foreign Lang I
 3/4 cr *

SCIENCE SEQUENCE Natural Science
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

COMS 331
 Theory of Computing
 (Pre-Req Math 166, ComS 228, ComS 230 or CprE 310, Engl 250)
 3 cr

COMS 362
 Object-Oriented Analysis & Design
 (Pre-req ComS 228, Engl 250)
 3 cr

SpCm 212
 Public Speaking
 3 cr

Elective or Foreign Language 102
 Foreign Lang II
 3/4 cr *

STATISTICS Option
 (Choose One)
305, 330, 341
 3 cr

COMS 309
 Software Development Practices
 (Pre-req C in ComS 228)
 3 cr

ENGL 302/305/309/314
 3 cr

Social Science
 3 cr **

ADDITIONAL SCIENCE REQUIREMENT
 Science sequence & Science course(s) from approved science list must total 13 credits or more
 4-5 cr

COMS 342
 Principles of Programming Languages
 (Pre-Req C in 228, ComS 230 or CprE 310)
 3 cr

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

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

Arts and Humanities
PHIL 343
 Philosophy of Technology
 3 cr

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

COMS 352
 Introduction to Operating Systems
 (Pre-Req 321, 327, Engl 250)
 3 cr

Arts and Humanities
 3 cr **

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

Requirements

Co-requisite course

Prerequisite Course

PLEASE BE AWARE THAT IF YOU TRANSFER IN CREDITS WHICH FULFILL ALL YOUR GENERAL EDUCATION REQUIREMENTS (SOCIAL SCIENCE & ARTS AND HUMANITIES) THERE MAY BE SEMESTERS WHERE YOU WILL NOT BE A FULLTIME STUDENT. YOU MAY NEED TO ADD A MINOR TO MEET FULLTIME STATUS (twelve credits or more).

MINOR INFORMATION CAN BE FOUND AT <http://catalog.iastate.edu/undergraduatemajors-alpha/#minorstext>

Foreign 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 from the LAS approved list on website and degree audit

** 3 cr. - U.S. Diversity

** 3 cr. – Internatl. Persp.

Math Elective Options: Math

207, 265, 266, 267, 304, 314, 317

Statistics 300 Level Options:

Statistics 305, 330, 331, 341

Natural Sciences - 13 Cr

BIOL 211/212 + labs OR
 CHEM 177/178 + labs OR
 Phys 221/222

&
 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 313, GEN 313L, GEN 320, GEOL 100, GEOL 100-111, GEOL 102, GEOL 201, GEOL 451, MAT E 215 & 215L, MTEOR 206, MTEOR 301, PSYCH 310, PHYS 221 or HIGHER

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

** Natural Science, U.S. Diversity, International Perspective, Arts & Humanities, and Social Sciences approved course lists can be found at <http://www.las.iastate.edu/students/academics/general-education/general-education-approved-course-list-2016-17/>