## COMPUTER SCIENCE FLOWCHART Requirements (Minimum 120 credits) Co-requisite course **ALEKS Math Assessmt COMS 127X** MATH 140 - 3 cr-Introduction to Programming for College Algebra Problem Solving Prerequisite Course MATH 143 - 4 cr (Elective Course) Calculus Prep 4 cr Foreign Language 1 year at the college level or **COMS 227 ENGL 150** Social Science COMS Introduction to Critical Thinking & 3 years high school **MATH 165** and/or Object-Oriented 101 Communication Calculus I (If English ACT 24 or higher Programming Orientation Arts & Humanities Arts and Humanities- 12 Cr 4 cr placement into English 250) (JAVA Language) R cr 3 cr \*\* (1) Phil 343 - 3 credits 4 cr 3 cr (2) Select additional 9 credits C- or better C- or better C or better from LAS approved list on **COMS 228** website and degree audit Social Science **COMS 203** Introduction to Careers in Computer Science **MATH 166** Data Structures and/or Arts & Social Sciences - 9 Cr **LIB 160** JAVA Language (Pre-Req C- 227,CR/E Math 165) R cr Calculus II **Humanities** Orientation Select credits form the LAS ComS 203 is a required course 4 cr 3 cr \*\* 1 cr to graduate in Computer approved list on website and 3 cr Science degree audit C- or better C- or better \*\* 3 cr. - U.S. Diversity \*\* 3 cr. - International **COMS 327 COMS 230** (previously ComS 229) **CprE 281** Perspective (previously ComS 330) Arts and Advanced Programming Digital Logic Discrete Computational **FNGI 250 Humanities** Techniques 4 cr Structures WOVE Composition Natural Sciences - 13 Credits C++ Language (Pre-Req Math 165, Sophomore 3 cr \*\* 3 cr (Pre-Req ComS 228, C- in ComS 227, Engl 150) . Classification BIOL 211/212 + labs OR CR/E Math 166) 3 cr CHEM 177/178 + labs OR 3 cr C- or better C or better Phys 221/222 C- or better C- or better & Additional Science Regmt. ANTHR 202, ANTHR 307, **COMS 311** MATH **COMS 321** Elective BBMB 221, BIOL 204, BIOL Design & Analysis of Algorithms Math Option Introduction to Computer (Pre-Reg Math 166, C- in 228, or (Choose One) Social 258, BIOL 312, BIOL 355, Architecture & Machine-ComS 230 or CprE 310, Foreign Level Programming (Pre-Req C- in ComS 228, Science 207, 265, 266, 267, CHEM 163-231, ENT 370, ENV Engl 150) Language 101 304, 314, 317 3 cr 3 cr \*\* CprE 281, Engl 250) S 324, FS HN 167, GEN 313, Foreign Lang I 3 cr 3/4 cr \* 3/4 cr GEN 313L, GEN 320, GEOL C- or better 100-111, GEOL 201, GEOL C- or better 451, MAT E 215 & 215L, **SCIENCE SEQUENCE** MTEOR 206, MTEOR 301, **Natural Science Elective** PSYCH 310, PHYS 221 or **COMS 331 COMS 362 BIOL 211 & Lab HIGHER** Object-Oriented Theory of Computing **SpCm 212** (Pre-Reg Math 166, Analysis & Design 4 cr & Foreign Public Speaking ComS 228, ComS 230 or (Pre-req ComS 228, **BIOL 212 & Lab** Language 102 3 cr ComS 400 - 6 credits CprE 310, Engl 250) Engl 250) Foreign Lang II 4 cr 3 cr 3 cr 400 Level Options 3/4 cr \* OR Select 2 courses, including at C- or better C- or better least one from Group 1 and an **CHEM 177 & Lab** additional course from Group 1 5 cr & **CHEM 178 & Lab** or 2. STATISTICS **COMS 309** 4 cr Option **ENGL 302/** Software Development 1) Com S 402 (if 3 cr or more), Social Science OR (Choose One) Practices 305/309/314 3 cr \*\* 409, 417, 425, 430, 437, 461, (Pre-req C- in ComS 228) 3 cr **PHYS 221 & Lab** 305, 330, 341 3 cr 487, SE/CprE 416 3 cr 5 cr & **PHYS 222 & Lab** 2) Com S 412, 418, 426, 433, C- or better C or better 5 cr 435, 440, 444, 454, 455, 472, ADDITIONAL 474, 477, 486, Math 481, CprE **COMS 342** 300 Level Elective **COMS 400** Arts and SCIENCE REQUIRMENT Principles of (Check Pre-requisite A minimum of 45 credits 431, CprE 458, CprE 489 **Humanities** Science sequence & Programming Languages numbered 300 or above is requirements) 400 level course from Science course(s) from (Pre-Rea C- in 228. **PHIL 343** required for graduation ComS 230 or CprE 310) approved science list must approved options Philosophy of 3 cr \* **GRADUATION REQUIREMENT** 3 cr 3 cr Technology total 13 credits or more 8 credits from Computer 3 cr 4-5 cr (C- or better) C- or better Science must be at the 300+ level courses with a grade of "C" **COMS 400 COMS 352** 300 Level Elective or better from ISU Arts and (Check Pre-requisite requirements) Introduction to Operating A minimum of 45 credits numbered 300 or Humanities 400 level course from Systems above is required for graduation LAST 32 CREDITS must be taken 321, 327, Engl 250) approved options 3 cr \*\* 3 cr \* 3 cr 3 cr at Iowa State University Adviser can waive six of the last C- or better C- or better 32 credits taken at Iowa State \* Elective Courses – Any course that is not remedial (can use minor or second major courses)

<sup>\*\*</sup> 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