## **COMPUTER SCIENCE DATA SCIENCE CONCENTRATION** NAME: Grade Hrs Pts Minimum Grade of "D" Required: Semester Grade Hrs Pts Semester Minimum Grade of "C" Required: ANY ENGL 101 Freshman Composition ANY MATH 200 Calculus I 5 3 Λ O ENGLISH (12 hrs) MATH 201 Calculus II ANY ENGL 102 Critical Reading and Writing FA / SP 3 5 MATH (19 hrs) ANY ENGL 230, 231 or 232 Literature FA / SP MATH 223 Foundations of Discrete Math 3 0 3 ANY ENGL 322 Intro to Professional and MATH 360 <sup>1</sup> Linear Algebra 3 O 3 **Technical Writing** ANY Science Sequence 1 Lecture FA / SP MATH 380 <sup>1</sup> Applied Statistics with 3 0 3 Probability ANY Science Sequence 1 Lab 1 0 <sup>1</sup> A minimum grade of "D" is required in MATH 360 and MATH 380. **NATURAL SCIENCE (12 hrs)** ANY Science Sequence II Lecture CMPS 161 Algorithm Design & 3 0 0 Implementation I CMPS 280 Algorithim Design & ANY ANY Science Sequence II Lab 1 0 3 0 Implementation II ANY Science Course Lecture ANY CMPS 285 Software Engineering 3 0 3 0 ANY Science Course Lab ANY CMPS 340 Introduction to Data Science 1 0 3 0 GBIO 151/BIOL 152 must be taken. A two-course sequence of lectures/lab SP ONLY **CMPS 375** Computer Architecture 0 3 coursework must also be taken: either Biology 151/152 & 153/154 or Physics 221/223 & 222/224 or Chemistry 121/123 & 122/124. All science course must ANY CMPS 390 Data Structures 3 0 come from the above courses. ANY Elective FA / SP CMPS 391 Numerical Methods OR **ELECTIVES (6 hrs)** 3 0 3 0 MATH 392 Numerical Methods Flective CMPS 401 Survey of Programming ΔΝΥ **FA ONLY COMPUTER SCIENCE (54 hrs)** 3 0 3 n Languages These are free electives with the recommendation to choose from the ANY CMPS 411 Capstone I 3 O following: CMPS 152, HSM 210, HSM 375, KINL 321 Art/Music Elective ANY CMPS 431 Operating Systems ANY 3 0 HIST Flective **FA ONLY** CMPS 434 Fundamental Algorithms ANY 3 Λ 3 Λ **COMM 211** Introduction to Public SP ONLY CMPS 439 Database Systems ANY 3 0 3 0 **GENERAL EDUCATION (17 hrs)** Speaking ECON 201 Macroeconomics OR ANY **FA ONLY** CMPS 451 Data Mining 3 0 3 0 ECON 202 Microeconomics ANY Social Science Elective SP ONLY CMPS 470 Machine Learning 3 n 3 0 Social Science Elective Choices: Anthropology, Criminal Justice, Geography, SP ONLY CMPS 473 Introduction to Computer 3 0 Psychology, Political Science, or Sociology. Vision Art/Music Elective Choices: Visual Arts, Music, Dance, or Theatre ANY CMPS 482 Current Trends in Computer 3 0 SE 101 or Free Elective ANY Science Λ 2 ANY Computer Science Elective (300-400 level) <sup>2</sup> n 3 Southeastern 101 is not required of transfer or re-admitted Southeastern ANY Computer Science Elective (300-400 level) <sup>2</sup>

200, 201, and 223. LAST UPDATED: 07/07/2021

students with 30 hours or more.

**CUM GPA:** No grades entered MAJ GPA: No grades entered **SELU GPA:** No grades entered NOTE: 1/2 of all major hours must be taken at Southeastern

458, CMPS 460, CMPS 479, CMPS 491.

120 TOTAL SEMESTER HOURS (out of 120) **0** of

<sup>2</sup> Must be chosen from CMPS 441, CMPS 443, CMPS 447, CMPS 450, CMPS 455, CMPS

**0** of 54 TOTAL MAJORS HOURS (out of 54)

Note: Grade of "C" or better is required for all CMPS courses as well as Math