

**Suggested Course Sequence – B. S. in Computer Science and Engineering  
Software Design and Development Track - AY 18-19**  
125 Credits

Fall		<b>Freshman</b>	Spring	
CS 114 (Fund. of Computing I)	4		CS 115 (Fund. of Computing II)	4
M 144 (Calculus I)	4		M 145 (Calculus II)	4
ES 143 (Engineering & Design)	3		PHY 112 (Calculus-Based Physics I)	4
FYS 100 or 100W (First Year Seminar)	3		Humanities Elective <sup>1,4</sup>	3
DIA 100 (Freshman Dialog)	1		WRT 110 (Academic Writing I)	3
<i>Total Credits</i>	15		<i>Total Credits</i>	18

Fall		<b>Sophomore</b>	Spring	
CS 220 (Data Structures)	3		CS 320 (Programming Languages)	3
M 221W (Discrete Math I)	4		ECE 231 (Digital Logic Design)	3
PHY 113 (Calculus-Based Physics II)	4		ECE 232 (Digital Logic Design Lab)	1
CH 110 (General Chemistry)	4		M 242 (Differential Equations)	3
WRT 210 (Foundations of Argument)	3		ES 242 (Engineering by Design)	3
			UISS 340D (Ethics in the Professions)	3
<i>Total Credits</i>	18		<i>Total Credits</i>	16

Fall		<b>Junior</b>	Spring	
CS 211 (Arch. & Assembly Lang.)	4		CS 455 (Systems Programming)	3
CS 368 (Data Mining)	3		CS 342 (Algorithms & Complexity)	3
ECE 255 (Fund. of Circuits & Electronics)	4		CS 460W (Software Development)	3
ES 342 (Engineering Practice)	1		ECE 382 (Sensors, Transducers, & Data Acq.)	3
UISC (Cultural and Historical Interpretation)	3		Social Science Elective <sup>2,4</sup>	3
<i>Total Credits</i>	15		<i>Total Credits</i>	15

Fall		<b>Senior</b>	Spring	
CSE 471 (Capstone Design)	1		CSE 472 (Capstone)	3
CS Elective <sup>5</sup>	3		Mathematics Elective <sup>5</sup>	3
CS 365 (Principles of Databases Systems)	3		Social Science Elective <sup>2,4</sup>	3
UISA (Artistic and Creative Expression)	3		Humanities <sup>1,4</sup> or Arts <sup>3,4</sup> Elective	3
UIST (Natural, Scientific, and Technological Exploration)	3			
Humanities Elective <sup>1,4</sup>	3			
<i>Total Credits</i>	16		<i>Total Credits</i>	12

**Notes:**

- <sup>1</sup> Humanities electives from 3 different disciplines: literature (ENG, but not writing classes), foreign language (ARA, FR, GER, HBR, ITA, SPA), history (HIS), and philosophy (PHI).
- <sup>2</sup> Social science electives from 2 different disciplines: economics (EC), politics (POL), psychology (PSY), and sociology (SOC).
- <sup>3</sup> Arts elective from: art history (ART), music history (HLM), cinema (CIN), or drama (DRA).
- <sup>4</sup> One Diversity and one Community/Citizenship from Humanities, Social science, and Arts electives.
- <sup>5</sup> CS electives include 200+ courses. ECE electives include ECE 234 and 300+ courses. Math electives include 200+ courses.