Suggested Course Sequence – B. S. in Computer Science and Engineering – AY 23-24

This is a sample sequence of courses and should only be used as a guide for establishing your schedule.

131-134 Credits

Fall		**Freshman**	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 100P (First Year Seminar)	3		Humanities Elective[1,4]	3
US 150 (FY Success Seminar)	1		WRT 110W (Academic Writing I)	3
Total Credits	15		Total Credits	18

Fall		**Sophomore**	Spring	
CS 220P (Data Structures)	3		CS 320 (Programming Languages)	3
CS 211 (Arch. & Assembly Lang.)	4		ECE 231 (Digital Logic Design)	3
M 221W (Discrete Math I)	4		ECE 232 (Digital Logic Design Lab)	1
PHY 113 (Calculus-Based Physics II)	4		M 242 (Differential Equations)	3
WRT 210W (Foundations of Arg.)	3		ES 242 (Engineering by Design)	3
			UISS 340D (Ethics in the Professions)	3
			CRD 200 (Career Preparation)	1
Total Credits	18		Total Credits	17

Fall		**Junior**	Spring	
CS 365 (Prin. of Database Systems)	3		CS 355 (Networks)	3
CS 451 (Operating Systems)	3		ECE 382 (Sensors, Trans., & Data Acq.)	3
CS 342 (Algorithms & Complexity) or	3		ES 342 (Engineering Practice)	1
CS 340 (Formal Lang. & Automata)[7]			UIST (Natural, Scientific, and Technological Exploration)	3
ECE 255 (Fund. of Circuits & Elec.)	4		Social Science Elective[2,4]	3
UISC (Cultural & Hist. Interpretation)	3		Humanities[1,4] or Arts[3,4] Elective	3
Total Credits	16		Total Credits	16

Fall		**Senior**	Spring	
CSE 471W (Capstone Design)	3		CSE 472P (Capstone)	3
CS 340 (Formal Lang. & Automata) or	3		CS/ECE Elective[5]	3
CS 342 (Algorithms & Complexity)[7]			Mathematics Elective[5]	3
CS/ECE Elective[5]	3		Social Science Elective[2,4]	3
CH 110 (General Chemistry)	4		Humanities Elective[1,4]	3
UISA (Artistic and Creative Expression)	3		LBC (Learning Beyond the Classroom)	0-3
Total Credits	16		Total Credits	15-18

[1] 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).

[2] Social science electives from 2 different disciplines: economics (EC), politics (POL), psychology (PSY), and sociology (SOC).

[3] Arts elective from: art history (ART), music history (HLM), cinema (CIN), or drama (DRA).

[4] One Diversity and one Community/Citizenship from Humanities, Social science, and Arts electives.

[5] CS electives include 200+ courses. ECE electives include ECE 234 and 300+ courses. Math electives include 200+ courses.

[6] LBC elective is internship, practicum, student teaching placement, preceptorship, honors thesis, independent research, study abroad, teaching assistantship, service learning/civic or community engagement.

[7] CS 340 and CS 342 are offered alternating years. Student should enroll in whichever course is offered as soon as possible.