

COMPUTER SCIENCE (CSIJ)								2018-2019							
Cr. Hrs	SEM 1	Cr. Hrs	SEM 2	Cr. Hrs	SEM 3	Cr. Hrs	SEM 4	Cr. Hrs	SEM 5	Cr. Hrs	SEM 6	Cr. Hrs	SEM 7	Cr. Hrs	SEM 8
4	CS 1110 Computer Science I (F, Sp, Sull)	4	CS 1120 Computer Science II (F, Sp)	4	CS 1310 Found of Comp Sci (F, Sp)	3	CS 3310 Data & File Structures (F, Sp)	3	CS 4310 Dsgn & Analysis of Algorithms (F, Sp)	3	CS 4540 Operating Systems (F, Sp)	3	CS 4900 Software Systems Development I (F, Sp)	2	CS 4910 Software Systems Development II (F, Sp)
	MATH 1180 ≥ C or concurrent		CS 1110 ≥ C MATH 1220 or 2000 ≥ C or concurrent		MATH 1180 ≥ C Some programming exp. 3 cr. = math, 1 cr. = CS		CS 1120 ≥ C CS 1310 or MATH 1450 ≥ C		CS 3310 ≥ C		CS 3240 or ECE 3570 ≥ C CS 3310 ≥ C		CS 3310 ≥ C CS 4430 ≥ C Senior Status		CS 4900 ≥ C
4	MATH 1220 or 1700 Calculus I	4	STAT 2600 Data Analysis Using R (F, Sp, Sul)	3	CS 3500 Web Tech (F, Sp)	3	CS 2230 Comp Org & Assemb Lang (F, Sp)	3	CS 3240 System Prog Concepts (F, Sp)	4	Approved Math/Stat/Science Elective	4	Approved Math/Stat/Science Elective	3	Approved CS Elective
	MATH 1180 ≥ C or placement		MATH 1100 ≥ C		Significant previous programming experience & a laptop		CS 1110 ≥ C		CS 1120 ≥ C CS 2230 or ECE 2510 ≥ C		See advisor for approved list		See advisor for approved list		
3	IEE 1020 Tech Comm (F, Sp)	3	ECE 2500 Digital Logic (F, Sp)	3	CS 4430 Database Mgmt Systems	4	MATH 2300 Linear Algebra	4	Approved Math/Stat/Science Elective	3	PHIL 3160 Gen Ed: Area 2 Ethics In Engineering/Tech	3	Approved CS Elective	3	Gen Ed: Area 7 Natural Sci & Tech
	ENGL 1000 or placement		MATH 1110 ≥ C		CS 1120 ≥ C		MATH 1220 ≥ C MATH 1230 recommended		See advisor for approved list						
3	Gen Ed: Area 1 Fine Arts	4	Gen Ed: Area 5 Social/Behavioral Sciences	3	COM 1040 Public Speaking	3	Gen Ed: Area 4 Other Cultures/Civs	4	Approved Gen Ed: Area 6 Lab Science	3	Free Elective**	3	Free Elective**	3	Free Elective**
									Must be 1 of 4 approved courses with labs						
			3	Gen Ed: Area 3 US Cultures/Issues	3	Free Elective**	2	Gen Ed: Area 8 Health & Well-being	3	Free Elective**	3	Free Elective**	2	Free Elective**	
	14 hours		15 hours		16 hours		16 hours		16 hours		16 hours		16 hours		13 hours
															122 hours total

** Free electives can be used for additional CS electives, a minor, or any other course. The number of free electives needed equals the number of hours needed to reach the 122 hour graduation requirement. It may be necessary to use some free electives as additional gen ed courses to reach minimum 37 credits required for the gen ed program.

CSIJ requires 41 hours of computer science courses (including CS 1310, see details above) and 30 hours of approved math, stat, lab science or other quantitative courses with at least 15 hours of approved math/stats courses (Calc I and above).

Courses used for graduation for CSIJ can include no more than 2 courses with D or DC grade, including CS courses, ECE 2500 and any courses counted as Math/Stat/Sci requirements or electives.

A grade of C or higher is required for all courses which serve as prerequisites.

Name: _____

WIN: _____

COMPUTER SCIENCE (CSIJ)

2019-2020

CS Electives

Must be approved by advisor

Cr. Hrs.	ELECTIVE	Cr. Hrs.	ELECTIVE	Cr. Hrs.	ELECTIVE	Cr. Hrs.	ELECTIVE
4	CS 2610 R Programming for Data Science	3	CS 3100 Storage, Retrieval, Processing Big Data	1 to 3	CS 4990 Undergraduate Research	3	CS 5260 Parallel Computations
	STAT 2600 ≥ C		CS 2610 ≥ C		Departmental approval		CS 3310 ≥ C
3	CS 5270 Computer Graphics	3	CS 5300 Artificial Neural Systems	3	CS 5400 Design of User Interfaces	3	CS 5541 Comp Networks & Distributed Systems
	CS 3310 ≥ C		CS 3310 ≥ C Rec = intro course in stats		CS 3310 ≥ C		CS 3310 ≥ C CS 3240 ≥ C
3	CS 5550 Comp Networks & Distributed Systems	3	CS 5600 Software Req. Analysis & Design	3	CS 5700 Computer Security & Info Assurance	3	CS 5800 Theory Foundations
	CS 3310 ≥ C CS 3240 ≥ C		CS 3310 ≥ C		CS 5550 ≥ C		CS 3310 ≥ C CS 4800 or CS 4850 or CS 5800 ≥ C
3	CS 5820 Artificial Intelligence	3	CS 5821 Machine Learning	3	CS 5950 Advanced Topics	1 to 3	CS 5990 Independent Study
	CS 3310 ≥ C		MATH 2300 ≥ C CS 3310 or CS 3100 ≥ C		May be repeated if different topics. Programming Contest (1 cr.) does not suffice for the CS elective.		Written approval of instructor Ask CS advisor for more information

Math, Stat, & Lab Science Electives

Natural Science with Lab (Must pick one, must be approved by advisor)

4	BIOS 1610** Molecular & Cellular Biology	4	CHEM 1100 & 1110 General Chemistry w/ Lab	4	GEOS 1300 Physical Geology
	BIOS 1600 or CHEG 2960 ≥ C		MATH 1110 ≥ C or placement		
5	PHYS 2050 & 2060 Mechanics & Heat				
	MATH 1220 ≥ C				
	MATH 1230 ≥ C or taken concurrent				

***BIOS 1610 will not satisfy Gen Ed Area 6.*