

COMPUTER SCIENCE DEGREE PROGRAM (2022 Catalog Total 121 hours) CHECK LIST – DATA SCIENCE CONCENTRATION TRACK

Student Name: _____ UIN: _____ Advisor: _____ THEA: _____ Entry Date _____

FRESHMAN YEAR												
		Sem						Sem				
First Semester		Hr	Gr	Yr	Tr	Second Semester		Hr	Gr	Yr	Tr	
MATH 2413	Cal. I (Pre-Req: Math 1316 or Math 1511) - Univ. Math Core (3 hours)	4				ENGL 1301	Freshman Composition I - Univ. Comm. Core	3				
COMM 1311	Fundamentals of Speech Comm. - Univ. Component Area	3				MATH 2414	Calculus with Analytic Geometry II (Pre-Req: Math 2413)	4				
	Science Course* - Univ Life & Phy Sci core	3					Global Awareness - Select one NOT completed for Univ. Soc. & Beh. Sci. Core	3				
	Science Course Lab	1										
COMP 1101	Intro to Engr. & CS Tech. Co-Req: GNEG 1010	1				COMP 1337	Computer Science II (Pre-Req: COMP 1336 & 1121. Pre/Co-Req: MATH 2413 and COMP 1122)	3				
COMP 1336	Computer Science I - Pre/Co-Req: (MATH 1316 or MATH 1511). Co-Req: COMP 1121.	3				COMP 1122	Computer Science Laboratory II Pre-Req: COMP 1336 & 1121. Pre/Co-Req: MATH 2413 and COMP 1337)	1				
COMP 1121	Computer Science Laboratory I - Pre/Co-Req: (MATH 1316 or MATH 1511). Co-Req: COMP 1336	1										
Total		16				Total		14				

SOPHOMORE YEAR												
		Sem						Sem				
First Semester		Hr	Gr	Yr	Tr	Second Semester		Hr	Gr	Yr	Tr	
COMP 2336	Data Structures Pre-Req: COMP 1337 and COMP 1122	3				HIST 1301	U.S. TO 1876 - Univ. Hist core	3				
COMP 2310	Discrete Structures Pre-Req: COMP 1377 and COMP 1122	3				COMP 2319	Computer Organization Pre-Req: COMP 1337 and COMP 1122	3				
ENGL 2311	Technical Writing (Pre-Req: ENGL 1301) - Univ. Comm. Core	3				MATH 3302	Probability and Statistics Pre-Req: MATH 2414	3				
	Social and Behavioral Sciences - Univ. Soc. & Beh. Sci. Core	3				MATH 3307	Linear Algebra Pre-Req: MATH 2414	3				
	Science Course* - Uni. Life & Phy. Sci core	3					Science Course* - Uni. Life & Phy. Sci core	3				
	Science Course Lab*	1					Science Course Lab*	1				
Total		16				Total		16				

JUNIOR YEAR												
		Sem						Sem				
First Semester		Hr	Gr	Yr	Tr	Second Semester		Hr	Gr	Yr	Tr	
POSC 2305	American Government I - Univ. Gov core	3				HIST 1302	The U.S. 1876 to Present - Univ. Hist core	3				
	CS Upper Level Elective	3				COMP 3305	Analysis of Algorithms Pre-Req: COMP 2336 & COMP 2310	3				
COMP 3306	Operating Systems Pre-Req: COMP 2336 & COMP 2319	3				COMP 3322	Software Engineering Pre-Req: COMP 2336	3				
COMP 3395	Database Management Pre-Req: COMP 2336	3				COMP 4315	Data Mining and Analytics Pre-req - MATH 3302 & MATH 3307	3				
COMP 3311	Intro to Data Science Pre-Req: COMP 1337 and COMP 1122	3					Creative Arts - Univ. Core <see reverse side>	3				
Total		15				Total		15				

SENIOR YEAR												
		Sem						Sem				
First Semester		Hr	Gr	Yr	Tr	Second Semester		Hr	Gr	Yr	Tr	
COMP 4100	Ethics and Soc. Issues in Computing Pre-Req: Senior Standing. Co-Req: COMP 4207	1				COMP 4208	Senior Design Project II Pre-Req: COMP 4207	2				
COMP 4207	Senior Design Project I (Pre-Req: COMP 3305, 3306, 3322, 3395 Co-Req: COMP 4100)	2				COMP 4311	Programming Languages Pre-Req: COMP 2336	3				
COMP 4312	Computer Networks Pre-Req: COMP 3306	3				COMP 4323	Network Security Pre-Req: COMP 4312	3				
COMP 4314	Intro to Parallel Computing Pre-Req: COMP 2336 & COMP 2310	3				COMP 4318	Information Retrieval Pre-Req: COMP 2336 & MATH 3302	3				
COMP 4316	Machine Learning Pre-Req: COMP 2336 & MATH 3302	3					Lang, Phil, and Culture - Univ. Core <see reverse side>	3				
POSC 2306	American Gov. II - Univ. Gov core	3										
Total		15				Total		14				

*** Allowed Science Sequences:**

Science Sequence 1: CHEM 1303#, CHEM 1111, CHEM 1304, CHEM 1112, PHYS 2325#, PHYS 2125 # Counted towards Univ Life & Phy Sci core

Science Sequence 2: CHEM 1303#, CHEM 1111, PHYS 2325#, PHYS 2125, PHYS 2326, PHYS 2126

Science Sequence 3: BIOL 1308#, BIOL 1108, PHYS 2325#, PHYS 2125, PHYS 2326, PHYS 2126

UNIVERSITY CORE, CS ELECTIVES, AND CS MINOR (2022 CATALOG)

• CREATIVE ARTS

ARCH 1303	Arch Design I	DRAM 1310	Intro To Theater	MUSC 1306	Music in Contemporary Life
ARTS 1301	Art Appreciation	DRAM 2322	African American Theater II	MUSC 2333	Afro-American Music
ARTS 2328	Afro-American Art	HCOL 1321	Honors Colloquium II	MUSC 2334	Survey of World Music
COMM 2300	Media Literacy	MUSC 1303	Fund Of Music		

• LANGUAGE, PHILOSOPHY AND CULTURE

ARCH 1301	Architectural History I	ENGL 2334	Studies In Lit	PHIL 2306	Ethics
ARCH 1302	Architectural History II	ENGL 2341	Intro. To Literature	SPAN 2311	Intermediate Spanish I
ARTS 1303	Art History I	HUMA 1301	Intro to Humanities	SPAN 2312	Intermediate Spanish II
ARTS 1304	Art History II	HUMA 1305	Mexican American Culture		
ENGL 2331	Survey of World Lit	PHIL 2303	Critical Thinking		

• SOCIAL AND BEHAVIORAL SCIENCES OPTIONS

AFAM 1301	Race class & Gender in America	FINA 2313	Financial Plan. Global Pers.	POSC 2321	Blacks / Pol. Sys.
AGHR 1330	Land Grant Sys & Food Sec	GEOG 1302	Intro To Geography	POSC 2350	Global Issues
CHEG 2308	Eco Anal Technical Appl.	HDFM 2351	Childhood Disorders	PSYC 2301	General Psychology
CRJS 1301	Intro. To Criminal Just.	HDFM 2353	Contem. Family	PSYC 2308	Child Psychology
CRJS 1307	Crime in America	HDFM 2355	Life Span Development	PSYC 2316	Psychology of Personality
ECON 1301	Fund. Of Econ in a Global	HIST 2321	World Civil. I	SOCG 1301	General Sociology
ECON 2301	Principle Of Macroecon.	HIST 2322	World Civil. II	SOCG 1306	Social Problems
ECON 2302	Principle Of Microecon.	MGMT 2326	Leadership in a Global Envi.	SOCG 2319	Sociology Of Minorities

• GLOBAL AWARENESS

Select one course from this list not completed for the Social & Behavioral Sciences area above

AGHR 1330	Land Grant Sys & Food Sec	HIST 2321	World Civil. I
CURR 2300	Global Influence on Teach Education	HIST 2322	World Civil. II
CVEG 2304	Global Development Issues	MGMT 2326	Leadership in a Global Envi.
ECON 1301	Fund. Of Econ in a Global	POSC 2350	Global Issues
FINA 2313	Financial Plan. Global Pers.	SOCG 1306	Social Problems

• COMPUTER SCIENCE ELECTIVES (2000 – LOWER 3000 & 4000 - UPPER)

Course #	Course Desc.	Prerequisite	Course #	Course Desc.	Prerequisite
COMP 2300	Intro. to Web Design & MM	Consent Of Advisor	COMP 3334	Internet of Things	COMP 2336
COMP 2302	Appl. Development using C#	COMP 1315, or 1336 or HS Prog.	COMP 4307(1-3)	Special Topics	Consent of Inst.
COMP 2313	Intro. Information Security	COMP 1337 and COMP 1122	COMP 4331	Computer Forensics	COMP 3306
COMP 2314	Introduction to Java	Consent Of Advisor.	COMP 4332	Mobile Security	COMP 3306
COMP 2315	Python Programming Lang.	COMP 1337 and COMP 1122	COMP 4333	Ethical Hacking & Pen Testing	COMP 3306 & COMP 4312
COMP 3301	Embedded System	COMP 1337 and COMP 1122	COMP 4384	Human-Comp. Inter.	COMP 3322
COMP 3321	Graphics & Visual Computing	COMP 2336			
COMP 3331	Information Privacy	COMP 2336			
COMP 3332	Cryptography	COMP 2310			
COMP 3333	Smart Device App. Dev.	COMP 2336			

• ELIGIBILITY TO TAKE UPPER DIVISION COLLEGE COURSES

The College of Engineering requires an eligibility standard for the students to take upper division college courses. Students in Computer Science Program must get a C or better in each of the Math, Science, English, and Computer Science courses to be eligible to enroll in upper division (3000 or 4000 level) courses in the College. Students transferring to the College of Engineering with 60 or more semester hours from another institution will be allowed a period of one semester to comply.

• REQUIREMENTS FOR COMPUTER SCIENCE AS A MINOR FIELD.....31 SCH

COMP 1336, 1121, 1337, 1122, 2336, 2310 and 9 semester hours of upper-division courses.....	23 SCH
MATH 2413, 2414.....	8 SCH