

**COMPUTER SCIENCE DEGREE PROGRAM ( 2023 Catalog Total 121 hours) CHECK LIST – DATA SCIENCE CONCENTRATION TRACK**

Student Name: \_\_\_\_\_ UIN: \_\_\_\_\_ Advisor: \_\_\_\_\_ THEA: \_\_\_\_\_ Entry Date \_\_\_\_\_

FRESHMAN YEAR																	
First Semester				Sem				Second Semester				Sem					
		Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr
<b>MATH 2413</b>	Cal. I(Pre-Req: Math 1316 or Math 1511) - Univ. Math Core (3 hours)	4				<b>ENGL 1301</b>	Freshman Composition I - Univ. Comm. Core	3									
<b>COMM 1311</b>	Fundamentals of Speech Comm. - Univ. Component Area	3				<b>MATH 2414</b>	Calculus with Analytic Geometry II (Pre-Req: Math 2413)	4									
	Science Course*-Univ Life & Phy Sci core	3					<b>Global Awareness- Select one NOT completed for Univ. Soc. &amp; Beh. Sci. Core</b>	3									
	Science Course Lab	1															
<b>COMP 1101</b>	Intro to Engr. & CS Tech. Co-Req:COMP 1101-P81	1				<b>COMP 1337</b>	Computer Science II (Pre-Req: COMP 1336 & 1121. Pre/Co-Req: MATH 2413 and COMP 1122)	3									
<b>COMP 1336</b>	Computer Science I – Pre/Co-Req: (MATH 1316 or MATH 1511). Co-Req:COMP 1121.	3				<b>COMP 1122</b>	Computer Science Laboratory II Pre-Req: COMP 1336 & 1121. Pre/Co-Req: MATH 2413 and COMP 1337)	1									
<b>COMP 1121</b>	Computer Science Laboratory I - Pre/Co-Req: (MATH 1316 or MATH 1511). Co-Req: COMP 1336	1															
Total		16				Total		14									

SOPHOMORE YEAR																	
First Semester				Sem				Second Semester				Sem					
		Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr
<b>COMP 2336</b>	Data Structures Pre-Req: COMP 1337 and COMP 1122	3				<b>HIST 1301</b>	U.S. TO 1876 - Univ. Hist core	3									
<b>COMP 2310</b>	Discrete Structures Pre-Req: COMP 1377 and COMP 1122	3				<b>COMP 2319</b>	Computer Organization Pre-Req: COMP 1337 and COMP 1122	3									
<b>ENGL 2311</b>	Technical Writing(Pre-Req: ENGL 1301) - Univ. Comm. Core	3				<b>MATH 3302</b>	Probability and Statistics Pre-Req: MATH 2414	3									
	Social and Behavioral Sciences - Univ. Soc. & Beh. Sci. Core	3				<b>MATH 3307</b>	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																	
First Semester				Sem				Second Semester				Sem					
		Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr
<b>POSC 2305</b>	American Government I -Univ. Gov core	3				<b>HIST 1302</b>	The U.S. 1876 to Present -Univ. Hist core	3									
<b>COMP</b>	CS Elective (Lower or Upper)	3				<b>COMP 3305</b>	Analysis of Algorithms Pre-Req: COMP 2336 & COMP 2310	3									
<b>COMP 3306</b>	Operating Systems Pre-Req: COMP 2336 & COMP 2319	3				<b>COMP 3322</b>	Software Engineering Pre-Req: COMP 2336	3									
<b>COMP 3395</b>	Database Management Pre-Req: COMP 2336	3				<b>COMP 4315</b>	Data Mining and Analytics Pre-req – MATH 3302 & MATH 3307	3									
<b>COMP 3311</b>	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																	
First Semester				Sem				Second Semester				Sem					
		Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr			Hr	Gr	Yr	Tr
<b>COMP 4100</b>	Ethics and Soc. Issues in Computing Pre-Req: Senior Standing. Co-Req: COMP 4207	1				<b>COMP 4208</b>	Senior Design Project II Pre-Req: COMP 4207	2									
<b>COMP 4207</b>	Senior Design Project I (Pre-Req: COMP 3305, 3306, 3322, 3395 Co-Req: COMP 4100)	2				<b>COMP 4311</b>	Programming Languages Pre-Req: COMP 2336	3									
<b>COMP 4312</b>	Computer Networks Pre-Req: COMP 3306	3				<b>COMP 4323</b>	Network Security Pre-Req: COMP 4312	3									
<b>COMP 4314</b>	Intro to Parallel Computing Pre-Req: COMP 2336 & COMP 2310	3				<b>COMP 4318</b>	Information Retrieval Pre-Req:COMP 2336 & MATH 3302	3									
<b>COMP 4316</b>	Machine Learning Pre-Req:COMP 2336 & MATH 3302	3					Lang, Phil, and Culture -Univ. Core <see reverse side>	3									
<b>POSC 2306</b>	American Gov. II -Univ. Gov core	3															
Total		15				Total		14									

**\* Allowed Science Sequences:**

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

Science Sequence 2: CHEM 1303<sup>#</sup>, CHEM 1111, PHYS 2325<sup>#</sup>, PHYS 2125, PHYS 2326, PHYS 2126

Science Sequence 3: BIOL 1308<sup>#</sup>, BIOL 1108, PHYS 2325<sup>#</sup>, PHYS 2125, PHYS 2326, PHYS 2126

## UNIVERSITY CORE, CS ELECTIVES, AND CS MINOR (2023 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	<b>FINA 2313</b>	<b>Financial Plan. Global Pers.</b>	POSC 2321	Blacks / Pol. Sys.
<b>AGHR 1330</b>	<b>Land Grant Sys &amp; Food Sec</b>	<b>GEOG 1302</b>	Intro To Geography	<b>POSC 2350</b>	<b>Global Issues</b>
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
<b>ECON 1301</b>	<b>Fund. Of Econ in a Global</b>	<b>HIST 2321</b>	<b>World Civil. I</b>	SOCG 1301	General Sociology
ECON 2301	Principle Of Macroecon.	<b>HIST 2322</b>	<b>World Civil. II</b>	<b>SOCG 1306</b>	<b>Social Problems</b>
ECON 2302	Principle Of Microecon.	<b>MGMT 2326</b>	<b>Leadership in a Global Envi.</b>	SOCG 2319	Sociology Of Minorities

### • GLOBAL AWARENESS (COMPONENT AREA ONE)

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

<b>AGHR 1330</b>	<b>Land Grant Sys &amp; Food Sec</b>	<b>HIST 2321</b>	<b>World Civil. I</b>
CHEG 2316	Ethical Engineering in a Global Society	<b>HIST 2322</b>	<b>World Civil. II</b>
CURR 2300	Global Influence on Teach Education	<b>MGMT 2326</b>	<b>Leadership in a Global Envi.</b>
CVEG 2304	Global Development Issues	<b>POSC 2350</b>	<b>Global Issues</b>
<b>ECON 1301</b>	<b>Fund. Of Econ in a Global</b>	<b>SOCG 1306</b>	<b>Social Problems</b>
<b>FINA 2313</b>	<b>Financial Plan. Global Pers.</b>		

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

Course #	Course Desc.	Prerequisite	Course #	Course Desc.	Prerequisite
<b>COMP 2300</b>	Intro. to Web Design & MM	Consent Of Advisor	<b>COMP 3343</b>	Internet of Things	COMP 2336
<b>COMP 2302</b>	Appl. Development using C#	COMP 1315, or 1336 or HS Prog.	<b>COMP 4307(1-3)</b>	Special Topics	Consent of Inst.
<b>COMP 2313</b>	Intro. Information Security	COMP 1337 and COMP 1122	<b>COMP 4331</b>	Computer Forensics	COMP 3306
<b>COMP 2314</b>	Introduction to Java	Consent Of Advisor.	<b>COMP 4332</b>	Mobile Security	COMP 3306
<b>COMP 2315</b>	Python Programming Lang.	COMP 1337 and COMP 1122	<b>COMP 4333</b>	Ethical Hacking & Pen Testing	COMP 3306 & COMP 4312
<b>COMP 3301</b>	Embedded System	COMP 1337 and COMP 1122	<b>COMP 4384</b>	Human-Comp. Inter.	COMP 3322
<b>COMP 3321</b>	Graphics & Visual Computing	COMP 2336			
<b>COMP 3331</b>	Information Privacy	COMP 2336			
<b>COMP 3332</b>	Cryptography	COMP 2310			
<b>COMP 3333</b>	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