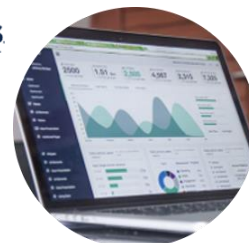


DEPARTMENT OF  
**COMPUTER SCIENCE**



**B.S. Computer Science + Data Science 2017-18**

All fields are experiencing rapid growth in access to massive amounts of information. In partnership with the Department of Applied Mathematics & Statistics, CS + Data Science retains the CS Core and focuses electives to help students analyze and make meaning of large amounts of data, resulting in smarter decision making, reduction in costs, and increased productivity.

Freshman Year							
Fall Semester	Course Title	Credit Hours	Semester(s) Offered	Spring Semester	Course Title	Credit Hours	Semester(s) Offered
PAGN1XX-2XX	Physical Ed	.5	F, Sp	PAGN1XX-2XX	Physical Ed	.5	F, Sp
LAIS100	Nature & Human Values	4	F, Sp, Su	PHGN100	Physics I <i>Pre: MATH111, Co: MATH112</i>	4.5	F, Sp, Su
CSM101	Freshman Seminar	.5	F	CSCI261	Prog. Concepts	3	F, Sp, Su
CSCI101	Intro to Computer Science	3	F, Sp	MATH112	Calculus II <i>Pre: MATH111 (≥C)</i>	4	F, Sp, Su
CHGN121	Principles of Chem.	4	F, Sp, Su	EPIC151	Design I	3	F, Sp, Su
MATH111	Calculus I	4	F, Sp, Su				
<b>Total Credits</b>		<b>16</b>				<b>15</b>	
Sophomore Year							
Fall Semester				Spring Semester			
PAGN1XX-2XX	Physical Ed	.5	F, Sp	PAGN1XX-2XX	Physical Ed	.5	F, Sp
CSCI262	Data Structures <i>Pre: CSCI261(≥C-)</i>	3	F, Sp, Su	CSCI358	Discrete Math <i>Pre: MATH213</i>	3	F, Sp
PHGN200	Physics II <i>Pre: PHGN100 (≥C-), Co: MATH213</i>	4.5	F, Sp, Su	EBGN201	Principles of Econ	3	F, Sp, Su
MATH213	Calculus III <i>Pre: MATH112 (≥C)</i>	4	F, Sp, Su	CSCI303	Intro to Data Sci. <i>Pre: CSCI101 or CSCI261</i>	3	Sp
DS Elective*	Dist. Science	4	F, Sp, Su	MATH225	Diff. Equations <i>Pre: MATH112 (≥C)</i>	3	F, Sp, Su
				LAIS200	Human Systems <i>Pre: LAIS100</i>	3	F, Sp, Su
				CSCI274	Intro to Linux <i>Pre: CSCI261</i>	1	F, Sp
<b>Total Credits</b>		<b>16</b>				<b>16.5</b>	
Junior Year							
Fall Semester				Spring Semester			
CSCI306	Software Engineering <i>Pre: CSCI262(≥C-)</i>	3	F, Sp	MATH335	Intro to Math Statistics <i>Pre: MATH334</i>	3	Sp
MATH332	Linear Algebra <i>Pre: MATH213</i>	3	F, Sp, Su	CSCI406	Algorithms <i>Pre: CSCI262(≥C-), MATH213, CSCI358</i>	3	F, Sp
MATH334	Intro to Probability <i>Pre: MATH213</i>	3	F	H&SS Mid	LAIS/EBGN I	3	F, Sp, Su
Free Elective		3	F, Sp, Su	MATH201	Prob & Statistics <i>Pre: MATH112</i>	3	F, Sp, Su
CSCI341	Computer Organization <i>Pre: CSCI261, Co:CSCI262</i>	3	F, Sp	CSCI403	Database Mgmt <i>Pre: CSCI262(≥C-)</i>	3	F, Sp
<b>Total Credits</b>		<b>15</b>				<b>15</b>	

Field Session							
<b>Summer I</b>							
CSCI370	Field Session <i>Pre: CSCI306</i>	6	Su				
<b>Total Credits</b>		<b>6</b>					
Senior Year							
<b>Fall Semester</b>				<b>Spring Semester</b>			
CSCI Elective**		3	F, Sp	DS CS Elective****		3	F, Sp
DS MATH Elective***		3	F, Sp	H&SS 400 Level	LAIS/EBGN III	3	F, Sp, Su
CSCI470	Machine Learning <i>Pre: MATH201, MATH332</i>	3	F	Free Elective		3	F, Sp, Su
H&SS Mid	LAIS/EBGN II	3	F, Sp, Su	Free Elective		3	F, Sp, Su
MATH424	Intro to Applied Stats <i>Pre: MATH201, MATH332</i>	3	F	CSCI400	Principles of Programming Languages <i>Pre: CSCI306</i>	3	F, Sp
<b>Total Credits</b>		<b>15</b>				<b>15</b>	

\*CBEN110, GEGN101, or CHGN122 or CHGN125 may be taken for Distributed Science Elective. **Total Credit Hours** **129.5**

\*\*Any 4XX or 5XX level Computer Science course.

\*\*\* Choose from MATH432, MATH436, MATH437, MATH438, or MATH439

\*\*\*\* Choose from CSCI404, CSCI423, CSCI440, CSCI474, or CSCI475

#### Computer Science Electives

Course	Course Title	Credit Hours	Semesters(s) Offered
CSCI404	Artificial Intelligence	3	Sp
CSCI422	User Interfaces	3	Check Trailhead
CSCI423	Computer Simulation	3	F
CSCI440	Parallel Computing for Scientists & Engineers	3	Check Trailhead
CSCI441	Computer Graphics	3	F
CSCI443	Advanced Computer Graphics Using Java	3	Check Trailhead
CSCI444	Advanced Computer Graphics	3	Sp
CSCI445	Web Programming	3	F
CSCI446	Web Applications	3	Check Trailhead
CSCI447	Scientific Visualization	3	Check Trailhead
CSCI448	Mobile Application Development	3	Sp
CSCI471	Computer Networks	3	F
CSCI473	Human-Centered Robotics	3	Sp
CSCI474	Introduction to Cryptography	3	Sp
CSCI475	Information Security & Privacy	3	F
CSCI498	Special Topics	1-6	F, Sp
EENG383	Microcomputer Architecture & Interfacing	3	F, Sp
MATH307	Introduction to Scientific Computing	3	F, Sp, Su

Semester(s) Offered based on Spring 2017, Summer 2017, and Fall 2017 course schedules. Future semester offerings are subject to change. Consult Trailhead prior to registration.