



B.S. Computer Science + Robotics Intelligent Systems 2017-18

Many disciplines of engineering focus on the physical creation and kinematics of robots and intelligent systems. In partnership with the Department of Mechanical Engineering, CS + Robotics and Intelligent Systems retains the CS Core and focuses electives to help students bring life to systems and give machines the ability to operate autonomously.

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				
Total Credits		16				15	
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	CSCI250	Python-Based Comp. <i>Co: MATH213, PHGN200</i>	3	F, 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
Total Credits		16				16.5	
Junior Year							
Fall Semester				Spring Semester			
CSCI306	Software Eng <i>Pre: CSCI262(≥C-)</i>	3	F, Sp	CSCI442	Operating Systems <i>Pre: CSCI262 (≥C-), CSCI341</i>	3	F, Sp
MATH332	Linear Algebra <i>Pre: MATH213</i>	3	F, Sp, Su	CSCI406	Algorithms <i>Pre: CSCI262(≥C-), MATH213, CSCI358</i>	3	F, Sp
EENG281	Intro to Circuits <i>Pre: PHGN200</i>	3	F, Sp, Su	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 Org. <i>Pre: CSCI261, Co:CSCI262</i>	3	F, Sp	MEGN441	Intro to Robotics <i>Pre: CSCI262, EENG281</i>	3	F, Sp
Total Credits		15				15	

Field Session							
Summer I							
CSCI370	Field Session <i>Pre: CSCI306</i>	6	Su				
Total Credits		6					
Senior Year							
Fall Semester				Spring Semester			
CSCI437	Intro to Comp Vision <i>Pre: MATH201 or EENG311, MATH332, CSCI261</i>	3	F	CSCI Elective**		3	F, Sp
EENG307	Feedback Controls <i>Pre: EENG281, MATH225</i>	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	CSCI404	Artificial Intelligence <i>Pre: CSCI262 (≥C-), MATH201</i>	3	Sp
Free Elective		3	F, Sp, Su	CSCI473	Human-Centered Robotics <i>Pre: CSCI262, MATH201</i>	3	Sp
Total Credits		15				15	

*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.

Computer Science Electives

Course	Course Title	Credit Hours	Semesters(s) Offered
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
CSCI470	Machine Learning	3	F
CSCI471	Computer Networks	3	F
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.