

## 2018-19 CS and CX PREREQUISITES

NUMB	CRSE TITLE	PRE-REQ COURSES
CS 1100	Freshman Leap Seminar	None
CS 1171	Computing in MATLAB	CS 1301 or CS 15XX or CS 13X1 or CS 1315
CS 1301	Introduction to Computing	None
CS 1315	Intro Media Computation	None
CS 1316	Rep Structure & Behavior	CS 1301 or CS 1315 or CS 1371
CS 1331	Intro to Object Oriented Prog	"C" or higher (CS 1301 or CS 1315 or CS 1321 or CS 1371)
CS 1332	Data Structures & Algorithms	"C" or higher (CS 1331 or CS 1322)
CS 1371	Computing for Engineers	None
CS 1372	Program Design for Engineers	CS 1171 or "C" or higher (CS 1371 or CS 1301)
CS 2050	Intro Discrete Math CS	None
CS 2051	Honors Discrete Math CS	None
CS 2110	Computer Organiz&Program	"C" or higher CS 1331
CS 2200	Systems and Networks	"C" or higher CS 2110
CS 2261	Media Device Arch	"C" or higher CS 1331
CS 2316	Data Input/Manipulation	CS 1371 or CS 1301 or CS 1315
CS 2335	Software Practicum	"C" or higher CS 1332
CS 2340	Objects and Design	"C" or higher (CS 1331 or CS 1372 or CS 1316)
CS 2345	Adv Practical O-O Prog	"C" or higher CS 2340 and (CS 2110 or CS 2261)
CS 2600	Knowledge Rep & Process	"C" or higher (CS 1301 or CS 1315 or CS 1371)
CS 2701	Startup Lab	None
CS 3101	Comp Sci Ventures	"C" or higher (CS 1301 or CS 1315 or CS 1371)
CS 3210	Design-Operating Systems	"C" or higher CS 2200
CS 3220	Processor Design	"C" or higher (CS 2200 and ECE 2031)
CS 3240	Languages and Computation	"C" or higher CS 2340
CS 3251	Computer Networking I	"C" or higher CS 2200
CS 3300	Intro to Software Engr	"C" or higher CS 2340
CS 3311	Project Design	"C" or higher CS 2340; co-requisite LMC 3432
CS 3312	Project Implementation	"C" or higher CS 2340 and LMC 3432; co-requisite LMC 3431
CS 3451	Computer Graphics	(MATH 2605 or 2401 or 2411 or 24X1 or 2550 or 2551 or 2561) and "C" or higher (CS 2110 or 2261) and "C" or higher (CS 1332 and CS 2340)
CS 3510	Dsgn&Analysis-Algorithms	"C" or higher CS 2050/2051 and (MATH 3012 or MATH 3022 or "C" or higher CS 1332)
CS 3511	Algorithms Honors	"C" or higher CS 2050/2051 and (MATH 3012 or MATH 3022 or "C" or higher CS 1332)
CS 3600	Intro-Artificial Intell	"C" or higher CS 1332
CS 3630	Intro-Perception&Robotic	"C" or higher CS 1332
CS 3651	Prototyping Intelligence Appl	"C" or higher ECE 2031
CS 3743	Emerging Technologies	None
CS 3750	User Interface Design	None
CS 3790	Intro-Cognitive Science	None
CS 4001	Computing & Society	None

CS	4002	Robots and Society	None
CS	4005	Next Gen Computing Tech	CS 2316
CS	4010	Intro to Computer Law	None
CS	4052	Systems Analysis & Design	None
CS	4057	Bus Process Analy/Design	MGT 2200
CS	4210	Adv Operating Systems	"C" or higher CS 3210
CS	4220	Embedded Systems	"C" or higher CS 2200
CS	4233	Parallel Comp Arch	"C" or higher CS 3210
CS	4235	Intro to Info Security	"C" or higher CS 2200
CS	4237	Comp & Network Security	"C" or higher CS 3251
CS	4240	Compilers & Interpreters	"C" or higher CS 2340
CS	4245	Intro Data Mining & Anal	(Math 2605 or 2401 or 2411 or 24X1) and "C" or higher (CS 1332 or CS 1372)
CS	4251	Computer Networking II	"C" or higher CS 3251
CS	4255	Intro-Network Management	"C" or higher CS 3251
CS	4260	Telecommunications Sys	(MATH 3215 or MATH 3225 or MATH/ISYE/CEE 3770 or ISYE 2028 or MATH 3670) and "C" or higher CS 2200
CS	4261	Mobile Apps & Svcs	"C" or higher CS 2200
CS	4270	Data Communications Lab	"C" or higher CS 3251
CS	4280	Survey-Telecom & the Law	None
CS	4290	Advanced Computer Org	"C" or higher CS 2200
CS	4320	Software Processes	"C" or higher CS 3300
CS	4330	Software Applications	"C" or higher CS 3300
CS	4342	Software Generation	"C" or higher CS 3300
CS	4365	Intro to Enterprise Computing	"C" or higher (CS 3210 or CS 4400)
CS	4392	Programming Languages	"C" or higher CS 2340
CS	4400	Intr to Database Systems	CS 1301 or CS 1371 or CS 1315
CS	4420	Database Sys Implement	"C" or higher CS 4400
CS	4432	Information Systems Dsgn	"C" or higher (CS 3300 and CS 4400)
CS	4440	Database Technologies	"C" or higher CS 4400
CS	4452	Human-Centered Computing	None
CS	4455	Video Game Design	"C" or higher CS 3451
CS	4460	Intro to Information Visualization	"C" or higher CS 1332
CS	4464	Computational Journalism	"C" or higher CS 1331
CS	4470	User Interface Software	"C" or higher (CS 2340 and CS 3750/PSYC 3750)
CS	4472	Design of Online Communities	None
CS	4475	Computational Photography	"C" or higher (CS 1301 or CS 1315 or CS 1371)
CS	4476	Intro to Computer Vision	(MATH 2605 or 2401 or 24X1 or 2411 or 1553 or 1554 or 1564) and "C" or higher CS 2110/2261
CS	4480	Digital Video Special FX	"C" or higher CS 3451
CS	4495	Computer Vision	(MATH 2605 or 2401 or 24X1 or 2411) and "C" or higher (CS 2110 or CS 2261)
CS	4496	Computer Animation	"C" or higher CS 3451
CS	4510	Automata and Complexity	(MATH 3012 or 3022) and (MATH 3215 or MATH 3225 or MATH 3670 or ISYE/CEE 3770 or ISYE 2027 with 2028) and "C" or higher CS 3510/3511
CS	4520	Approximation Algs	"C" or higher CS 4540

CS	4530	Randomized Algs	"C" or higher CS 4540
CS	4540	Advanced Algs	(MATH 3012 or 3022) and (MATH 3215 or MATH 3225 or MATH 3670 or ISYE/CEE 3770 or ISYE 2027 with 2028) and "C" or higher CS 3510/3511
CS	4550	Scientific Data Processing & Vis	"C" or higher CS 3451
CS	4560	Verification of Systems	"C" or higher (CS 1050 and CS 3510)
CS	4590	Principles & App of Comp Audio	None
CS	4605	Mobile and Ubiquitous Computing	"C" or higher (CS 2110 or CS 2261)
CS	4611	AI Problem Solving	"C" or higher CS 3600
CS	4613	Knowledge Systems Engr	"C" or higher CS 3600
CS	4615	Knowledge Based Modeling & De	"C" or higher CS 3600
CS	4616	Pattern Recognition	"C" or higher CS 1331
CS	4622	Case-Based Reasoning	"C" or higher CS 3600
CS	4625	Intelligent & Interactive Systems	"C" or higher CS 1331
CS	4632	Adv Intelligent Robotics	"C" or higher CS 3630
CS	4635	Knowledge Based AI	"C" or higher CS 3600
CS	4646	Machine Learning for Trading	"C" or higher CS 3600
CS	4641	Machine Learning	"C" or higher CS 1331
CS	4649	Robot Intelli Planning	"C" or higher CS 1332
CS	4650	Natural Language	"C" or higher CS 3510 or 3511
CS	4660	Educational Technology	None
CS	4665	Educ Tech: Dsgn & Eval	"C" or higher CS 4660
CS	4670	CSCL	"C" or higher CS 4660
CS	4675	Internet Sys & Services	"C" or higher CS 2200
CS	4685	Pervasive Systems & Networking	"C" or higher CS 2200
CS	4690	Emperical Methods in HCI	"C" or higher CS/PSYC 3750
CS	4710	CS for Bioinformatics	None
CS	4725	Info Security Policies	None
CS	4726	Privacy Tech Policy Law	None
CS	4731	Game AI	"C" or higher CS 3600
CS	4741	Int Mgt Dev - Proj Prep	None
CS	4742	Comp & Mgt Cap Proj	"C" or higher CS 4741
CS	4745	Info & Comm Tech & Global Dev	None
CS	4752	Phil Issues-Computation	None
CS	4770	Mixed Reality Design	LCC 2700 and "C" or higher CS 2340
CS	4791	Integrative Proj-Cog Sci	None
CS	4792	Dsgn Proj-Cognitive Sci	None
CS	4793	Perspectives-Cog Science	"C" or higher CS/PST/PSYC/ISYE 3790
CS	4911	Design Capstone Project	"C" or higher CS 2340
CS	4912	Design Capstone Project	"C" or higher CS 2340
CX	4010	Computational Prob Solv	"C" or higher (CS 1301 or CS 1371)
CX	4140	Comp Model & Algorithms	"C" or higher (CS 1331 or CS 1372 or CS 2316 or CX 4010 or ECE 2035 or ECE 2036)
CX	4220	Intro High Perf Comp	"C" or higher (CS 1331 or CS 1372 or CS 2316 or CX 4010 or ECE 2035 or ECE 2036)

CX	4230	Computer Simulation	(MATH 3215/3225 or MATH 3670 or MATH/ISYE/CEE 3770 or ISYE 2028 or BMED 2400 or ECE 3077) and "C" or higher (CS 1331 or CS 1372 or CS 2316 or CX 4010 or ECE 2035 or ECE 2036)
CX	4232	Sim & Military Gaming	"C" or higher (CS 1331 or CS 1372 or CS 2316 or CX 4010 or ECE 2035 or ECE 2036)
CX	4236	Distributed Simulat Sys	"C" or higher (CS 1331 or CS 1372 or CS 2316 or CX 4010 or ECE 2035 or ECE 2036)
CX	4240	Computing for Data Analy	"C" or higher (CS 1301 or CS 1371)
CX	4242	Data & Visual Analytics	(MATH 2605 or 2401 or 24X1 or 2411 or 2550 or 2551 or 2561) and (MATH 3215/3225 or or MATH 3670 or MATH/ISYE/CEE 3770 or ISYE 2028 or BMED 2400 or ECE 3770) and "C" or higher (CS 1331 or CS 1372 or CS 2316 or CX 4010 or ECE 2035 or ECE 2036 or CX 4240)
CX	4640	Numerical Analysis I	"C" or higher (MATH 2403 or MATH 2413 or MATH 24X3 or MATH 2602 or MATH 2603 or MATH 2552 or MATH 2562)
CX	4641	Numerical Analysis II	"C" or higher (CX 4640 or MATH 4640)
CX	4777	Vector&Parallel Sci Comp	MATH 2605 or MATH 2401 or MATH 24X1 or MATH 2411 or MATH 2550 or MATH 2551 or MATH 2561