Curriculum

☐ Undergraduate

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (assignment)	Semester	Remark
Basic Courses	CS101	Introduction to Programming	2:3:3(5)	Spring, Fall	
Elective Basic Courses	CS109	Programming Practice	2:3:3	Fall	
Mandatory Major Course	CS204	Discrete Mathematics	3:0:3(8)	Spring, Fall	*MAS275
	CS206	Data Structure	3:0:3(6)	Spring, Fall	
	CS300	Introduction to Algorithms	3:0:3(8)	Spring, Fall	
	CS311	Computer Organization	3:0:3(3)	Spring	*EE312
	CS320	Programming Languages	3:0:3(3)	Spring	
	CS330	Operating Systems and Lab.	3:3:4(12)	Fall	
	CS408	Computer Science Project	1:6:3	Spring, Fall	
Elective Major Course	CS202	Problem Solving	2:3:3(15)	Spring, Fall	
	CS211	Digital System and Lab.	3:3:4(10)	Spring	
	CS220	Programming Principles	3:0:3(6)	Spring or Fall	
	CS230	System Programming	3:0:3(4)	Spring or Fall	
	CS270	Intelligent robot design and programming	2:3:3	Spring	
	CS310	Embedded computer systems	3:3:4(10)	Fall	
	CS322	Formal Languages and Automata	3:0;3(6)	Fall	
	CS324	Programming for computational finance	3:0:3	Spring	
	CS340	Interdisciplinary Approach to Network Science	3:0:3	Fall	
	CS341	Introduction to Computer Networks	3:3:4	Fall	
	CS350	Introduction to Software Engineering	3:0:3(2)	Spring	
	CS360	Introduction to Database	3:0:3(8)	Spring, Fall	
	CS362	File Structures	2:3:3(6)	Fall	
	CS370	Symbolic Programming	2:3:3(6)	Spring	
	CS372	Natural Language Processing with Python	3:0:3	Spring or Fall	
	CS380	Introduction to Computer Graphics	3:3:4(6)	Spring	
	CS402	Introduction to Logic for Computer Science	3:0:3(6)	Spring or Fall	
	CS406	Mathematics for Computer Science	3:0:3	Fall	
	CS410	Introduction to VLSI Design	3:0:3(4)	Spring or Fall	
	CS420	Compiler Design	3:0:3(6)	Spring	
	CS422	Computation Theory	3:0:3(8)	Spring or Fall	
	CS440	Data Communication	3:0:3(6)	Spring	
	CS442	Mobile Computing and Applications	3:0:3	Spring	
	CS443	Distributed Algorithms and Systems	3:0:3	Fall	
	CS448	Introduction to Information Security	3:0:3(1)	Spring	
Elective Major Course	CS451	IT Service Engineering	3:1:3(6)	Spring	
	CS452	Business Process Engineering and Management	3:0:3	Fall	
	CS453	Automated Software Testing	3:0:3(6)	Fall	

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (assignment)	Semester	Remark
	CS455	Software Project	2:3:3(4)	Fall	
	CS457	Web-based Software Development	3:0:3	Spring	
	CS459	Web Technologies and Business Strategies	3:0:3(6)	Fall	*MSB458
	CS470	Introduction to Artificial Intelligence	3:0:3(8)	Spring	
	CS472	Human-Comupter Interaction	3:1:3	Spring	
	CS474	Text Mining	3:0:3	Fall	
	CS476	Collective Intelligence in Biomedical Applications	3:0:3(6)	Fall	
	CS478	Financial Data Analysis and Mining	3:0:3	Fall	
	CS482	Interactive Computer Graphics	3:2:3	Spring or Fall	
	CS484	Introduction to Image Processing	3:0:3	Fall	
	CS489	Computer Ethic & Social Issues	3:0:3(2)	Fall	
	CS492	Special Topics in Computer Science	3:0:3(6)	Spring or Fall	
	CS493	Special Topics in Computer Science I	1:0:1	Spring or Fall	
	CS494	Special Topics in Computer Science II	2:0:2	Spring or Fall	
Research	CS490	Research in Computer Science	0:6:3	Spring, Fall	
	CS495	Individual Study	0:6:1	Spring, Fall	
	CS496	Seminar	0:2:1	Spring, Fall	

※ Note: 1) 400 and 500 level courses open to both undergraduate and graduate students
2) * stands for substitutable courses

□ Graduate

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (assignment)	Semester	Remark
Mandatory General Course	CC010	Special Lecture on Leadership	1:0:0	Fall	required
	CC020	Ethics and Safety I	1AU	Spring·Fall	
	CC511	Probability and Statistics	2:3:3	Spring·Fall	
	CC512	Introduction to Materials and Engineering	3:0:3	Spring·Fall	
	CC513	Engineering Economy and Cost Analysis	3:0:3	Spring	choose
	CC522	Introduction to Instruments	2:3:3	Fall	1
	CC530	Entrepreneurship and Business Strategies	3:0:3	Spring	
	CC532	Collaborative System Design and Engineering	4:0:4	Spring	
Elective Course (Essential)	CS500	Design and Analysis of Algorithms	3:0:3(6)	Spring	**
	CS504	Computational Geometry	3:0:3(8)	Spring	**
	CS510	Computer Architecture	3:0:3(6)	Spring	**
	CS520	Theory of Programming Languages	3:0:3(6)	Fall	**
	CS522	Theory of Formal Languages and Automata	3:0:3(6)	Spring	**
	CS530	Operating System	3:0:3(6)	Spring/Fall	**
	CS540	Network Architecture	3:0:3(9)	Spring/Fall	**
	CS542	Internet Systems Technology	3:0:3(9)	Fall	**
	CS543	Distributed Systems	3:0:3(3)	Fall	**
	CS546	Wireless Mobile Internet	3:0:3(5)	Spring	**
	CS548	Advanced Information Security	3:0:3(6)	Spring	**
	CS550	Software Engineering	3:0:3(4)	Spring	**
	CS552	Models of Software Systems	3:0:3(10)	Fall	**
	CS554	Designs for Software and Systems	2:3:3(4)	Fall	**
	CS560	Database System	3:0:3(6)	Spring	**
	CS562	Database Design	3:0:3(6)	Fall	**
	CS570	Artificial Intelligence and Machine Learning	3:0:3(6)	Spring/Fall	**
	CS572	Intelligent Robotics	3:0:3(6)	Spring/Fall	**
	CS574	Natural Language Processing I	3:0:3(6)	Fall	**
	CS576	Computer Vision	3:0:3(8)	Spring/Fall	**
	CS579	Computational Linguistics	3:0:3(6)	Spring	**
	CS580	Interactive Computer Graphics	3:1:3(5)	Spring	**
	CS590	Semantic Web	3:0:3(6)	Spring/Fall	**

※ Note: 1) ** Stands for 500 level courses open to both undergraduate and graduate students
2) * Stands for substitutable courses

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (assignment)	Semester	Remark
Elective Course (Elective)	CS541	Smart Business Application and Development	3:0:3(5)	Fall	*MSB554 **
	CS578	Bionic Human-Robot Interaction	3:0:3	Spring	**
	CS591	Software Ecosystem	3:0:3(5)	Fall	**
	CS600	Graph Theory	3:0:3(6)	Fall	
	CS610	Parallel Processing	3:0:3(8)	Spring	*EE611
	CS612	Social network-aware ubiquitous computing	3:0:3	Spring	
	CS620	Instruction of Compiler Construction	3:0:3(2)	Fall	
	CS624	Program Analysis	3:0:3	Fall	
	CS632	Embedded Operating Systems	3:0:3(6)	Fall	
	CS634	Real-Time Systems	3:0:3	Spring or Fall	
	CS636	UX-oriented Platform Design Studio I	0:9:3	Spring or Fall	
	CS644	Ubiquitous Networking	3:0:3(6)	Fall	
	CS646	Digital Contents Security	3:0:3	Spring or Fall	
	CS650	Advanced Software Engineering	3:0:3(6)	Fall	
	CS652	Software & Systems Product Line Engineering	3:0:3(12)	Spring/Fall	
	CS654	Software Process	3:0:3(12)	Spring/Fall	
	CS655	System Modeling and Analysis	3:0:3(6)	Spring	*EE612
	CS656	Software Engineering Economics	3:0:3	Spring	
	CS660	Information Storage and Retrieval	3:0:3(6)	Spring	
	CS662	Distributed Database	3:0:3(6)	Spring	
	CS664	Advanced Database System	3:0:3(6)	Fall	
	CS665	Advanced Data Mining	3:0:3	Spring	
	CS670	Fuzzy and Intelligent System	3:0:3(6)	Spring	
	CS671	Advanced Machine Learning	3:0:3(6)	Spring/Fall	
	CS672	Reinforcement Learning	3:0:3(2)	Spring/Fall	
	CS674	Natural Language Processing II	3:0:3(6)	Fall	
	CS676	Pattern Recognition	3:0:3(3)	Fall	*EE634
	CS680	Advanced Computer Graphics	3:0:3(6)	Fall	
	CS681	Computational Colorimetry	3:0:3	Spring or Fall	
	CS682	Digital Storytelling	3:0:3(3)	Spring	
	CS684	Human-Computer Interaction	3:0:3(5)	Fall	
	CS686	Motion Planning and Applications	3:0:3	Fall	
	CS688	Large-Scale Image & Video Retrieval	3:0:3	Fall	
	CS700	Special Topics in Computation Theory	3:0:3(8)	Spring/Fall	
	CS710	Special Topics in Computational Architecture	3:0:3(6)	Spring/Fall	
	CS712	Special Topics in Parallel Processing	3:0:3(6)	Fall	
	CS720	Special Topics in Programming Languages	3:0:3(2)	Spring/Fall	

Classification	Subject No.	Subject Name	Lecture:Lab.: Credit (assignment)	Semester	Remark
Elective Course (Elective)	CS730	Special Topics in Operating Systems	3:0:3(6)	Spring/Fall	
	CS744	Special Topics in System Architecture	3:0:3(9)	Spring/Fall	
	CS748	Special Topics on Information Security	3:0:3(3)	Fall	
	CS750	Special Topics in Software Engineering	2:3:3(6)	Spring/Fall	
	CS760	Special Topics in Database System	3:0:3(6)	Spring/Fall	
	CS770	Special Topics in Computer Vision	3:0:3(8)	Spring/Fall	
	CS772	Special Topics in Natural Language Processing	3:0:3(6)	Spring/Fall	
	CS774	Special Topics in Artificial Intelligence	3:0:3(6)	Spring/Fall	
	CS776	Special Topics in Cognitive Science	3:0:3(6)	Spring/Fall	
	CS780	Special Topics in Interactive Computer Graphics	2:3:3(10)	Spring/Fall	
	CS788	Special Topics on Human-Computer Interaction	3:0:3(6)	Spring/Fall	
	CS790	Technical Writing for Computer Science	2:3:3(6)	Spring·Fall	
	CS891	Special Topics in Computer Science Ⅰ	1:0:1	Spring or Fall	
	CS892	Special Topics in Computer Science Ⅱ	2:0:2	Spring or Fall	
	CS893	Special Topics in Computer Science Ⅲ	3:0:3	Spring or Fall	
Research	CS960	M.S. Thesis Research		Spring·Fall	
	CS965	Individual Study in M.S.		Spring·Fall	
	CS966	Seminar	1:0:1	Spring·Fall	
	CS980	Ph.D. Dissertation Research		Spring·Fall	
	CS986	Seminar	1:0:1	Spring·Fall	