

Course Schedule - Fall 2004

Computer Science

100 Freshman Orientation in CS Credit: 1 hours.

(C S 100) Introduction to Computer Science as a field and career for computer science majors. Overview of the field is presented along with specific examples of problem areas and methods of solution. Recommended for all freshman Computer Science majors.

CRN	Type	Section	Time	Days	Location	Instructor
30094	lecture	U	04:00 PM - 04:50 PM	T	room 1310 Digital Computer Laboratory	Kamin, S
30094: Meets 12-Oct-04 - 10-Dec-04.						
	lecture	U	04:00 PM - 04:50 PM	T	room 1320 Digital Computer Laboratory	Kamin, S
: Meets 12-Oct-04 - 10-Dec-04.						

101 Intro to Computing, Eng & Sci Credit: 3 hours.

(C S 101) Fundamental principles, concepts, and methods of computing, with emphasis on applications in the physical sciences and engineering. Basic problem solving and programming techniques; fundamental algorithms and data structures; use of computers in solving engineering and scientific problems. Credit is not given for both CS 101, either CS 105 or CS 110 section C. Prerequisite: MATH 220.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one lab-discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
35879	lecture	AL1	12:00 PM - 12:50 PM	MW	room 66 Library - Main	Gambill, T
35879: Quant Reasoning II course.						
35883	lecture	AL2	01:00 PM - 01:50 PM	MW	room 66 Library - Main	Gambill, T
35883: Quant Reasoning II course.						
35886	laboratory-discussion	AYA	03:00 PM - 04:50 PM	M	room L520 Digital Computer Laboratory	Gambill, T; Kheradpour, P
35886: Quant Reasoning II course.						
35889	laboratory-discussion	AYB	09:00 AM - 10:50 AM	T	room L520 Digital Computer Laboratory	Gambill, T; Cheng, T
35889: Quant Reasoning II course.						

35890	laboratory-discussion	AYC	11:00 AM - 12:50 PM	T	room L520 Digital Computer Laboratory	Gambill, T; Lim, S
35890: Quant Reasoning II course.						
35893	laboratory-discussion	AYD	01:00 PM - 02:50 PM	T	room L520 Digital Computer Laboratory	Gambill, T; Lim, S
35893: Quant Reasoning II course.						
35896	laboratory-discussion	AYE	03:00 PM - 04:50 PM	T	room L520 Digital Computer Laboratory	Gambill, T; Bengtson, E
35896: Quant Reasoning II course.						
35899	laboratory-discussion	AYF	03:00 PM - 04:50 PM	W	room L520 Digital Computer Laboratory	Gambill, T; Cheng, T
35899: Quant Reasoning II course.						
35902	laboratory-discussion	AYG	09:00 AM - 10:50 AM	R	room L520 Digital Computer Laboratory	Gambill, T; Bengtson, E
35902: Quant Reasoning II course.						
35907	laboratory-discussion	AYH	11:00 AM - 12:50 PM	R	room L520 Digital Computer Laboratory	Gambill, T; Garver, C
35907: Quant Reasoning II course.						
35910	laboratory-discussion	AYI	01:00 PM - 02:50 PM	R	room L520 Digital Computer Laboratory	Gambill, T; Kalra, A
35910: Quant Reasoning II course.						
35913	laboratory-discussion	AYJ	03:00 PM - 04:50 PM	R	room L520 Digital Computer Laboratory	Gambill, T; Kalra, A
35913: Quant Reasoning II course.						
35915	laboratory-discussion	AYK	10:00 AM - 11:50 AM	F	room L520 Digital Computer Laboratory	Gambill, T; Kheradpour, P
35915: Quant Reasoning II course.						
35918	laboratory-discussion	AYL	12:00 PM - 01:50 PM	F	room L520 Digital Computer Laboratory	Gambill, T; Garver, C
35918: Quant Reasoning II course.						

(C S 105) Introduction to computing as an essential tool of academic and professional activities in disciplines other than science and engineering. Functions and interrelationships of computer system components: hardware, systems and applications software, networks. Widely used application packages such as spreadsheets and databases. Concepts and practice of programming for the solution of simple problems in different application areas. Students interested in Scientific and engineering applications of computing should take CS 101 instead of this course. Prerequisite: MATH 012 or equivalent. Credit is not given for both CS 105 and 101.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one lab-discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
35823	lecture	AL1	08:00 AM - 08:50 AM	MW	room 66 Library - Main	Gambill, T; Woodbury, M
35823: Quant Reasoning I course.						
35824	lecture	AL2	09:00 AM - 09:50 AM	MW	room 66 Library - Main	Gambill, T; Woodbury, M
35824: Quant Reasoning I course.						
35825	lecture	AL3	10:00 AM - 10:50 AM	MW	room 66 Library - Main	Gambill, T; Woodbury, M
35825: Quant Reasoning I course.						
35826	lecture	AL4	11:00 AM - 11:50 AM	MW	room 66 Library - Main	Gambill, T; Woodbury, M
35826: Quant Reasoning I course.						
35827	laboratory-discussion	AYA	05:00 PM - 05:50 PM	W	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Yasmeen, A
35827: Quant Reasoning I course.						
35828	laboratory-discussion	AYB	06:00 PM - 06:50 PM	W	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Yasmeen, A
35828: Quant Reasoning I course.						
35829	laboratory-discussion	AYC	07:00 PM - 07:50 PM	W	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Colombi, A
35829: Quant Reasoning I course.						
35830	laboratory-discussion	AYD	08:00 PM - 08:50 PM	W	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Colombi, A
35830: Quant Reasoning I course.						
35831	laboratory-discussion	AYE	09:00 AM - 09:50 AM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Tam, E
35831: Quant Reasoning I course.						

35832	laboratory-discussion	AYF	10:00 AM - 10:50 AM	R	room 70A Wohlers Hall	Swarup, S; Gambill, T; Woodbury, M
35832: Quant Reasoning I course.						
35833	laboratory-discussion	AYG	11:00 AM - 11:50 AM	R	room 70A Wohlers Hall	Swarup, S; Gambill, T; Woodbury, M
35833: Quant Reasoning I course.						
35835	laboratory-discussion	AYH	12:00 PM - 12:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Hilldore, B
35835: Quant Reasoning I course.						
35836	laboratory-discussion	AYI	01:00 PM - 01:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Newell, J
35836: Quant Reasoning I course.						
35837	laboratory-discussion	AYJ	02:00 PM - 02:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Newell, J
35837: Quant Reasoning I course.						
35838	laboratory-discussion	AYK	03:00 PM - 03:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Parr, D
35838: Quant Reasoning I course.						
35840	laboratory-discussion	AYL	04:00 PM - 04:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Parr, D
35840: Quant Reasoning I course.						
35843	laboratory-discussion	AYM	05:00 PM - 05:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Tam, E
35843: Quant Reasoning I course.						
35847	laboratory-discussion	AYN	06:00 PM - 06:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Davis, B
35847: Quant Reasoning I course.						
35849	laboratory-discussion	AYO	07:00 PM - 07:50 PM	R	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Davis, B
35849: Quant Reasoning I course.						
35851	laboratory-discussion	AYP	10:00 AM - 10:50 AM	F	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Morlok, R
35851: Quant Reasoning I course.						
35854	laboratory-	AYQ	11:00 AM - 11:50	F	room 70A	Gambill, T;

	discussion		AM		Wohlers Hall	Woodbury, M; Morlok, R
35854: Quant Reasoning I course.						
35856	laboratory- discussion	AYR	03:00 PM - 03:50 PM	M	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Hilldore, B
35856: Quant Reasoning I course.						
35858	laboratory- discussion	AYS	04:00 PM - 04:50 PM	M	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Yin, M
35858: Quant Reasoning I course.						
35873	laboratory- discussion	AYT	05:00 PM - 05:50 PM	M	room 70A Wohlers Hall	Gambill, T; Woodbury, M; Yin, M
35873: Quant Reasoning I course.						

125 Intro to Computer Science Credit: 4 hours.

(C S 125) First course for computer science majors and other students with a deep interest in computing. The course introduces students to basic concepts in computing and fundamental techniques for solving computational problems Prerequisite: Three years of high school mathematics or MATH 012.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one lab-discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
35876	lecture	AL1	01:00 PM - 01:50 PM	MWF	room 1404 Siebel Center for Comp Sci	Zych, J
35876: Quant Reasoning I course.						
35878	lecture	AL2	02:00 PM - 02:50 PM	MWF	room 1404 Siebel Center for Comp Sci	Zych, J
35878: Quant Reasoning I course.						
35881	laboratory- discussion	AYA	09:00 AM - 10:50 AM	T	room 1245 Digital Computer Laboratory	Zych, J; Koomen, P
35881: Quant Reasoning I course.						
35885	laboratory- discussion	AYB	11:00 AM - 12:50 PM	T	room 1245 Digital Computer Laboratory	Zych, J; Koomen, P
35885: Quant Reasoning I course.						
35888	laboratory- discussion	AYC	01:00 PM - 02:50 PM	T	room 1245 Digital Computer Laboratory	Zych, J; Sundaresan, J
35888: Quant Reasoning I course.						

35891	laboratory-discussion	AYD	03:00 PM - 04:50 PM	T	room 1245 Digital Computer Laboratory	Zych, J; Bashir, A
35891: Quant Reasoning I course.						
35898	laboratory-discussion	AYE	03:00 PM - 04:50 PM	W	room 1245 Digital Computer Laboratory	Zych, J; Koomen, P
35898: Quant Reasoning I course.						
35901	laboratory-discussion	AYF	09:00 AM - 10:50 AM	R	room 1245 Digital Computer Laboratory	Zych, J; Naisbitt, J
35901: Quant Reasoning I course.						
35904	laboratory-discussion	AYG	11:00 AM - 12:50 PM	R	room 1245 Digital Computer Laboratory	Zych, J; Naisbitt, J
35904: Quant Reasoning I course.						
35906	laboratory-discussion	AYH	01:00 PM - 02:50 PM	R	room 1245 Digital Computer Laboratory	Zych, J; Sundaresan, J
35906: Quant Reasoning I course.						
35908	laboratory-discussion	AYI	03:00 PM - 04:50 PM	R	room 1245 Digital Computer Laboratory	Zych, J; Bashir, A
35908: Quant Reasoning I course.						
35911	laboratory-discussion	AYJ	09:00 AM - 10:50 AM	F	room 1245 Digital Computer Laboratory	Zych, J; McGovern, A
35911: Quant Reasoning I course.						
35914	laboratory-discussion	AYK	11:00 AM - 12:50 PM	F	room 1245 Digital Computer Laboratory	Zych, J; McGovern, A
35914: Quant Reasoning I course.						
35894	laboratory-discussion	AYL	03:00 PM - 04:50 PM	F	room 1245 Digital Computer Laboratory	Zych, J; Bashir, A
35894: Quant Reasoning I course.						

173 Discrete Structures Credit: 2 hours.

(C S 173) Studies discrete mathematical structures frequently encountered in the study of Computer Science. Topics will include sets, propositions, boolean algebra, induction, recursion, relations, functions, and graphs. Credit is not given for both CS 173 and MATH 213.

CRN	Type	Section	Time	Days	Location	Instructor
30102	lecture-discussion	M	11:00 AM - 11:50 AM	TR	room 1320 Digital Computer Laboratory	Heeren, C
40083	lecture-discussion	N	12:30 PM - 01:20 PM	TR	room 1310 Digital Computer Laboratory	Heeren, C

196 Freshman Honors Course in CS Credit: 1 hours.

(C S 196) Course is offered for honors credit in conjunction with other 100-level computer science courses, in which concurrent registration is required. Enrollment is strictly limited to beginning students with superior talents in computer science. A special examination may be required for admission to this course May be repeated.

Prerequisite: Concurrent registration in another 100-level computer science course (see Schedule); or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
31507	lecture-discussion	1	ARRANGED			Gambill, T
31507: SECTION 1 is for students registered in CS 101						
31508	lecture-discussion	25	ARRANGED			Zych, J
31508: SECTION 25 is for students registered in CS 125						
31509	lecture-discussion	5	ARRANGED			Woodbury, M
31509: SECTION 5 is for students registered in CS 105						
31510	lecture-discussion	73	ARRANGED			Heeren, C
31510: SECTION 73 is for students registered in CS 173						

199 Undergraduate Open Seminar Credit: 1 to 5 hours.

(C S 199) May be repeated.

CRN	Type	Section	Time	Days	Location	Instructor
42790	lecture-discussion	A	04:00 PM - 04:50 PM	R		Kamin, S
42790: 1 hoursTopic: Intro to ProgrammingMeets 18-Oct-04 - 10-Dec-04.						
40944	lecture-discussion	LP	11:00 AM - 12:15 PM	TR	room 1131 Siebel Center for Comp Sci	Pitt, L
40944: 3 hoursDiscovery course.Topic: Programming for the Rest of Us. First Year Discovery Program Course.						

Registration restricted to freshmen. Students should enroll in only one Discovery course. Students who enroll in more than one Discovery course may be dropped from the additional Discovery courses. For course descriptions, see the Discovery Program booklet.

31513	lecture	MW	07:00 PM - 07:50 PM	W	room ARR Siebel Center for Comp Sci	Woodbury, M
31513: 1 hours TOPIC: INTELLECTUAL PROPERTY LAW						

210 Ethical & Prof'l Issues in CS Credit: 2 hours.

(C S 210) Ethics for the computing profession. Ethical decision-making; licensing; intellectual property, freedom of information and privacy. Students will be required to make oral presentations Credit is not given for both CS 210 and ECE 316. Prerequisite: CS 225 and junior standing.

CRN	Type	Section	Time	Days	Location	Instructor
31516	lecture-discussion	1	03:00 PM - 04:50 PM	M	room 1103 Siebel Center for Comp Sci	Woodbury, M
31517	lecture-discussion	2	03:00 PM - 04:50 PM	T	room 1103 Siebel Center for Comp Sci	Woodbury, M

225 Data Structure & Softw Prin Credit: 4 hours.

(C S 225) Data abstractions: elementary data structures: lists, stacks, queues, trees; searching and sorting techniques. Introduction to the principles of software engineering including term programming project. Prerequisite: CS 125 or both CS 110 and junior standing; CS 173 or MATH 213; or consent of instructor.

Students must register for one lecture-discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
35917	lecture	AL1	12:00 PM - 12:50 PM	MWF	room 1404 Siebel Center for Comp Sci	Zych, J
35917: Quant Reasoning II course.						
35919	lecture	AL2	03:00 PM - 03:50 PM	MWF	room 1404 Siebel Center for Comp Sci	Zych, J
35919: Quant Reasoning II course.						
35923	laboratory-discussion	AYA	01:00 PM - 02:50 PM	W	room 1235 Digital Computer Laboratory	Zych, J; Ivan, A
35923: Quant Reasoning II course.						
35926	laboratory-discussion	AYB	03:00 PM - 04:50 PM	W	room 1235 Digital Computer Laboratory	Zych, J; Klementiev, A

35926: Quant Reasoning II course.						
35944	laboratory-discussion	AYC	09:00 AM - 10:50 AM	R	room 1235 Digital Computer Laboratory	Zych, J; Klementiev, A
35944: Quant Reasoning II course.						
35947	laboratory-discussion	AYD	11:00 AM - 12:50 PM	R	room 1235 Digital Computer Laboratory	Zych, J; Klementiev, A
35947: Quant Reasoning II course.						
35950	laboratory-discussion	AYE	01:00 PM - 02:50 PM	R	room 1235 Digital Computer Laboratory	Zych, J; Korula, N
35950: Quant Reasoning II course.						
35952	laboratory-discussion	AYF	03:00 PM - 04:50 PM	R	room 1235 Digital Computer Laboratory	Wong, L; Zych, J
35952: Quant Reasoning II course.						
35954	laboratory-discussion	AYG	09:00 AM - 10:50 AM	F	room 1235 Digital Computer Laboratory	Wong, L; Zych, J
35954: Quant Reasoning II course.						
35956	laboratory-discussion	AYH	11:00 AM - 12:50 PM	F	room 1235 Digital Computer Laboratory	Zych, J; Ivan, A
35956: Quant Reasoning II course.						
35959	laboratory-discussion	AYI	01:00 PM - 02:50 PM	F	room 1235 Digital Computer Laboratory	Wong, L; Zych, J
35959: Quant Reasoning II course.						
35960	laboratory-discussion	AYJ	03:00 PM - 04:50 PM	F	room 1235 Digital Computer Laboratory	Zych, J; Korula, N
35960: Quant Reasoning II course.						

231 Computer Architecture I Credit: 3 hours.

(C S 231) Introduction to computer architecture, working up from the logic gate level: combinational and sequential networks; computer arithmetic; arithmetic/logic units; memory organization; control unit design. Credit is not given for both CS 231 and ECE 290. Prerequisite: CS 125.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30105	lecture	X	11:00 AM - 11:50	MW	room 1404 Siebel	Kale, L; Lu, S

			AM		Center for Comp Sci	
30105: Quant Reasoning II course.						

232 Computer Architecture II Credit: 3 hours.

(C S 232) Second-level course in computer architecture: machine-level programming, instruction sets, data representations; subroutines; input/output hardware and software; linking and loading; relation to high-level languages. Credit is not given for both CS 232 and ECE 390. (Counts for advanced hours in LAS). Prerequisite: CS 231.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
35966	laboratory	AB1	10:00 AM - 10:50 AM	M	room 1109 Siebel Center for Comp Sci	Kinnersley, W
35968	laboratory	AB2	11:00 AM - 11:50 AM	M	room 1109 Siebel Center for Comp Sci	Kinnersley, W
35971	laboratory	AB3	01:00 PM - 01:50 PM	M	room 1105 Siebel Center for Comp Sci	Zilles, C
35973	laboratory	AB4	02:00 PM - 02:50 PM	M	room 1105 Siebel Center for Comp Sci	Keller, S
35978	laboratory	AB5	11:00 AM - 11:50 AM	T	room 1103 Siebel Center for Comp Sci	Keller, S
35979	laboratory	AB6	03:00 PM - 03:50 PM	T	room 1109 Siebel Center for Comp Sci	Zimmerman, E
35963	lecture	AL1	10:00 AM - 10:50 AM	WF	room 1320 Digital Computer Laboratory	Zilles, C

257 Numerical Methods Credit: 3 hours.

(C S 257) Introduction to numerical methods for students in science and engineering; topics include floating-point computation, systems of linear equations, approximation of functions and integrals, the single nonlinear equation, and the numerical solution of ordinary differential equations; discusses various applications in science and engineering; includes some programming as well as the use of high quality mathematical library routines Same as MATH 257. Students with earned credit in CS 450 or MATH 450 may not receive additional credit for CS or MATH 257. (Counts for advanced hours in LAS). Prerequisite: A 100-level computer science course; MATH 225 or 415; MATH 243.

CRN	Type	Section	Time	Days	Location	Instructor
36131	lecture-	M	12:30 PM - 01:45	WF	room 1320 Digital	Kerkhoven, T;

	discussion		PM		Computer Laboratory	Shirazi, A
36131: Quant Reasoning II course.						

273 Intro to Theory of Computation Credit: 3 hours.

(C S 273) Introduction to the various aspects of the theory of computation, including the necessary background in first order predicate logic, combinatorics, and recurrence relations; asymptotics; basics of algorithm analysis; NP-completeness; formal languages and automata. Prerequisite: CS 125 and 173; or consent of instructor.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30107	lecture-discussion	P	02:00 PM - 03:15 PM	WF	room 1320 Digital Computer Laboratory	Viswanathan, M
30107: Quant Reasoning II course.						

296 Honors Course in CS Credit: 1 hours.

(C S 296) Group projects for honors work in computer science. Sections of this course are offered in conjunction with other 200-level computer science courses, in which concurrent registration is required. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 200-level computer science course (see Schedule); or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
31518	lecture-discussion	25	ARRANGED			Zych, J
31518: Section 25 is for students registered in CS 225						
31519	lecture-discussion	31	ARRANGED			Kale, L
31519: Section 31 is for students registered is CS 231						
31520	lecture-discussion	32	ARRANGED			Zilles, C
31520: Section 32 is for students registered in CS 232						
31521	lecture-discussion	57	ARRANGED			Kerkhoven, T
31521: Section 57 is for students registered in CS 257						
31522	lecture-discussion	73	ARRANGED			Viswanathan, M
31522: Section 73 is for students registered in CS 273						

397 Individual Study Credit: 1 to 3 hours.

(C S 290) May be repeated. Prerequisite: 100-level computer science course; consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10464	independent study		ARRANGED			
10464: Instructor Approval Required						

400 Data Structures, Non-CS Majors Credit: 4 hours.

(C S 300) Course integrates software engineering principles with data structures implemented in C++. While prior experience with either C, C++ or Java is assumed, C++ will be taught in the first three weeks of the course. Software engineering will be covered in three stages: personal software process (checkpoints, project plans, defects and code reviews), prior to coding (process models, requirements and design) and after coding (testing and quality assurance techniques). The concepts, principles, and use of data structures will include pointers, lists, arrays, sets, stacks, trees, hashing, graphs, priority queues and sorting. Special emphasis will be placed on the implementations of these structures in real-world applications Same as CSE 400. Credit is not given for both CS 400 and 225. Computer Science and Computer Engineering majors may not receive credit for CS 400. Prerequisite: CS 110, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
36125	lecture	AL1	02:00 PM - 02:50 PM	MWF	room 1131 Siebel Center for Comp Sci	Peiper, C
36126	laboratory-discussion	AY1	ARRANGED			Peiper, C
36127	laboratory-discussion	AY2	ARRANGED			Peiper, C

411 Database Systems Credit: 3 or 4 hours.

(C S 311) Examines the logical organization of databases: the entity-relationship model; the hierarchical, network, and relational data models and their languages. Functional dependencies and normal forms. Design, implementation, and optimization of query languages; security and integrity; concurrency control, and distributed database systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 or 400; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
41612	online	ONL	ARRANGED			Chang, K
41612: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu ; MCS degree students must take this course for 4 hours; Please see http://online.engr.uiuc.edu/descriptions/fall2004.htm for more details on this course. OnlineAO Tuition 608, and AO Fees 36.00 dollars.						
30109	lecture-discussion	Q3	03:30 PM - 04:45 PM	WF	room 1320 Digital Computer Laboratory	Chang, K

30109: 3 hours						
40086	lecture-discussion	Q4	03:30 PM - 04:45 PM	WF	room 1320 Digital Computer Laboratory	Chang, K
40086: 4 hours						

413 *Intro to Combinatorics* Credit: 3 or 4 hours.
(C S 313) Same as MATH 413. See MATH 413.

CRN	Type	Section	Time	Days	Location	Instructor
39196	lecture-discussion	D1G	11:00 AM - 11:50 AM	MWF	room 159 Altgeld Hall	Boylan, M
33540	lecture-discussion	D1U	11:00 AM - 11:50 AM	MWF	room 159 Altgeld Hall	Boylan, M
33540: 3 hours						

418 *Computer Graphics* Credit: 3 or 4 hours.
(C S 318) Introduction to basic mathematical tools and computational techniques for modeling, rendering, and animating 3-D scenes. Same as CSE 427. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 or 400; MATH 225 or 415; MATH 242 or 243.

CRN	Type	Section	Time	Days	Location	Instructor
36121	lecture-discussion	G4	03:30 PM - 04:45 PM	TR	room 1404 Siebel Center for Comp Sci	Yu, Y
36121: 4 hours						
36119	lecture-discussion	UG3	03:30 PM - 04:45 PM	TR	room 1404 Siebel Center for Comp Sci	Yu, Y
36119: 3 hours						

421 *Programming Lang and Compilers* Credit: 3 or 4 hours.
(C S 321) Introduction to the structure of programming languages and their implementation. Basic language design principles; abstract data types; functional languages; type systems; object-oriented languages. Basics of lexing, parsing, syntax-directed translation, semantic analysis and code generation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225, and CS 232 or ECE 390.

CRN	Type	Section	Time	Days	Location	Instructor
30128	lecture-discussion	D3	02:00 PM - 03:15 PM	TR	room 1404 Siebel Center for Comp	Chan, J; Adve, V; Gammer, I

					Sci	
30128: 3 hours						
40087	lecture-discussion	D4	02:00 PM - 03:15 PM	TR	room 1404 Siebel Center for Comp Sci	Chan, J; Adve, V; Gammer, I
40087: 4 hours						

422 Programming Language Design Credit: 3 or 4 hours.

(C S 322) Advanced course in principles of language design. Using imperative and functional programming as unifying themes, major language design paradigms will be explored. Tools in this study will include both practical language processor construction and theoretical models. Emphasis will be on reasoning about programs and languages. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CRN	Type	Section	Time	Days	Location	Instructor
30132	lecture-discussion	T3	03:30 PM - 04:45 PM	TR	room 1302 Siebel Center for Comp Sci	Rosu, G
30132: 3 hours						
40088	lecture-discussion	T4	03:30 PM - 04:45 PM	TR	room 1302 Siebel Center for Comp Sci	Rosu, G
40088: 4 hours						

423 Operating Systems Design Credit: 3 or 4 hours.

(C S 323) The organization and structure of modern operating systems and concurrent programming concepts. Deadlock, virtual memory, processor scheduling, and disk systems. Performance, security, and protection. Same as CSE 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 232 or ECE 390.

CRN	Type	Section	Time	Days	Location	Instructor
36115	lecture-discussion	G4	10:00 AM - 10:50 AM	MWF	room 1404 Siebel Center for Comp Sci	Nahrstedt, K; Monroe, B; Tan, B
36115: 4 hours						
36113	lecture-discussion	UG3	10:00 AM - 10:50 AM	MWF	room 1404 Siebel Center for Comp Sci	Nahrstedt, K; Monroe, B; Tan, B
36113: 3 hours						

425 Distributed Systems Credit: 3 hours.

(C S 328) Covers topics needed for a basic understanding of distributed computer systems: Protocols, specification techniques, global states and their determination, reliable broadcast, transactions and commitment, security, and

real-time systems. Same as CSE 424, and ECE 428. Prerequisite: CS 423, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
36091	lecture-discussion	P	11:00 AM - 12:15 PM	TR	room 1105 Siebel Center for Comp Sci	Wah, B

427 Software Engineering, I Credit: 3 or 4 hours.

(C S 327) Software process, analysis and design. Topics include: software development paradigms, system engineering, function-based analysis and design, and object-oriented analysis and design. Course will use team-projects for hands-on exercises Same as CSE 426. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 and 273; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
36107	lecture-discussion	G4	12:30 PM - 01:45 PM	TR	room 1320 Digital Computer Laboratory	Johnson, R; Dig, D
36107: 4 hours						
41594	online	ONL	ARRANGED			Johnson, R; Dig, D
41594: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu ; MCS degree students must take this course for 4 hours; Please see http://online.engr.uiuc.edu/descriptions/fall2004.htm for more details on this course. OnlineAO Tuition 608, and AO Fees 36.00 dollars.						
36104	lecture-discussion	UG3	12:30 PM - 01:45 PM	TR	room 1320 Digital Computer Laboratory	Johnson, R
36104: 3 hours						
42461	lecture-discussion	V3	ARRANGED			Johnson, R; Dig, D
42461: 3 hours3 hours. Video section.						
42462	lecture-discussion	V4	ARRANGED			Johnson, R; Dig, D
42462: 4 hours4 hours. Video section.						

431 Embedded Sys Arch and Software Credit: 0 to 4 hours.

(C S 331) Survey of sampled data systems and embedded architecture; overview of the key concepts in common embedded system applications; signal processing and control; embedded microprocessor and device interface; time-critical I/O handling; data communications, real-time operating systems and techniques for the development and analysis of embedded real-time software. Hands-on laboratory projects. 3 undergraduate hours only. 3 or 4 graduate hours only. Prerequisite: CS 232 or ECE 390; CS 423.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
40100	laboratory	AB1	10:00 AM - 11:50 AM	T	room ARR Siebel Center for Comp Sci	Donkervoet, W
40101	laboratory	AB2	02:00 PM - 03:50 PM	T	room ARR Siebel Center for Comp Sci	Cheema, A
31526	laboratory	AB3	03:00 PM - 04:50 PM	W	room ARR Siebel Center for Comp Sci	Jamall, M
40102	laboratory	AB4	05:00 PM - 06:50 PM	W	room ARR Siebel Center for Comp Sci	Donkervoet, W
40103	laboratory	AB5	10:00 AM - 11:50 AM	R	room ARR Siebel Center for Comp Sci	Donkervoet, W
31525	laboratory	AB6	05:00 PM - 06:50 PM	R	room ARR Siebel Center for Comp Sci	Jamall, M
31523	laboratory	AB7	10:00 AM - 11:50 AM	F	room ARR Siebel Center for Comp Sci	Cheema, A
31524	laboratory	AB8	02:00 PM - 03:50 PM	F	room ARR Siebel Center for Comp Sci	Jamall, M
40667	lecture-discussion	AE3	11:00 AM - 12:15 PM	WF	room 1310 Digital Computer Laboratory	Caccamo, M
40667: 3 hours						
40668	lecture-discussion	AE4	11:00 AM - 12:15 PM	WF	room 1310 Digital Computer Laboratory	Caccamo, M
40668: 4 hours Restricted to graduate students.						
40089	lecture-discussion	AEG	11:00 AM - 12:15 PM	TR	room 1310 Digital Computer Laboratory	Sha, L
40089: 4 hours Restricted to graduate students.						
31528	lecture-discussion	AEU	11:00 AM - 12:15 PM	TR	room 1310 Digital Computer Laboratory	Sha, L
31528: 3 hours						

433 Computer System Organization Credit: 3 or 4 hours.

(C S 333) Computer system analysis and design. Organizational dependence on computations to be performed. Speed and cost of parts and overall machines. Instruction set design. Pipeline and vector machines. Memory

hierarchy design. Same as CSE 422. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 232 or ECE 390.

CRN	Type	Section	Time	Days	Location	Instructor
36069	lecture-discussion	MU3	09:30 AM - 10:45 AM	TR	room 1310 Digital Computer Laboratory	Torrellas, J
36069: 3 hours						
36076	lecture-discussion	XG	12:30 PM - 01:45 PM	WF	room 1109 Siebel Center for Comp Sci	Adve, S; Drexelius, C

435 Intro VLSI System Design Credit: 3 hours.
(C S 335) Same as CSE 433 and ECE 425. See ECE 425.

CRN	Type	Section	Time	Days	Location	Instructor
36903	lecture	R	01:00 PM - 02:20 PM	TR	room 260 Everitt Elec and Comp Engr Lab	Wong, M

438 Communication Networks Credit: 3 hours.
(C S 338) Layered architectures and the OSI Reference Model; design issues and protocols in the transport, network, and data link layers; architectures and control algorithms of local-area, point-to-point, and satellite networks; standards in networks access protocols; models of network interconnection; overview of networking and communication software. Same as CSE 425 and ECE 438. Prerequisite: CS 231 or ECE 290; one of MATH 461 or 463 or ECE 413.

CRN	Type	Section	Time	Days	Location	Instructor
36061	lecture-discussion	X	10:00 AM - 10:50 AM	MWF	room 1310 Digital Computer Laboratory	Polychronopoulos, C; Hou, J

440 Intro Artificial Intelligence Credit: 3 or 4 hours.
(C S 348) Introductory description of the major subjects and directions of research in artificial intelligence; topics include AI languages (LISP and PROLOG), basic problem solving techniques, knowledge representation and computer inference, machine learning, natural language understanding, computer vision, robotics, and societal impacts. Same as ECE 448. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 or ECE 390; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
36047	lecture-discussion	Q3	12:30 PM - 01:45 PM	TR	room 1404 Siebel Center for Comp	Dejong, G

					Sci	
36047: 3 hours						
36053	lecture-discussion	Q4	12:30 PM - 01:45 PM	TR	room 1404 Siebel Center for Comp Sci	Dejong, G
36053: 4 hours						

443 Introduction to Robotics Credit: 4 hours.
(C S 343) Same as ECE 470, GE 421, and ME 445. See ECE 470.

CRN	Type	Section	Time	Days	Location	Instructor
36936	laboratory	AB1	01:00 PM - 02:50 PM	T	room 316 Transportation Bldg	
36948	laboratory	AB2	01:00 PM - 02:50 PM	R	room 316 Transportation Bldg	
41574	laboratory	AB3	03:00 PM - 04:50 PM	T	room 316 Transportation Bldg	
36967	lecture	AL1	11:30 AM - 12:50 PM	TR	room 260 Everitt Elec and Comp Engr Lab	Hutchinson, S

450 Intro to Numerical Analysis Credit: 3 or 4 hours.
(C S 350) Introduction to numerical analysis, including linear system solvers, optimization techniques, interpolation and approximation of functions, solving systems of nonlinear equations, eigenvalue problems, least squares, and quadrature; numerical handling of ordinary and partial differential equations. Same as CSE 401, ECE 491, and MATH 450. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 101 or 125; CS 257 or MATH 415; MATH 385, 386, or 441; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
36016	lecture-discussion	B3	09:00 AM - 09:50 AM	MWF	room 1320 Digital Computer Laboratory	Heath, M
36016: 3 hours						
36020	lecture-discussion	B4	09:00 AM - 09:50 AM	MWF	room 1310 Digital Computer Laboratory	Heath, M
36020: 4 hours						

458 Numerical Linear Algebra Credit: 3 or 4 hours.

(C S 358) Direct and iterative methods for systems of linear equations; over determined systems of equations; eigenvalue problems; nonlinear systems of equations. Same as CSE 412 and MATH 458. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 257 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
41131	lecture-discussion	A3	11:00 AM - 12:15 PM	TR	room 1302 Siebel Center for Comp Sci	De Sturler, E
41131: 3 hours						
41132	lecture-discussion	A4	11:00 AM - 12:15 PM	TR	room 1302 Siebel Center for Comp Sci	De Sturler, E
41132: 4 hours						

473 Algorithms Credit: 3 or 4 hours.

(C S 373) Advanced data structures, graph algorithms, arithmetic algorithms, geometric algorithms, string problems, parallel algorithms, NP-completeness. Same as CSE 414 and MATH 473. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 and 273; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
35846	lecture-discussion	Q3	11:00 AM - 12:15 PM	TR	room 1404 Siebel Center for Comp Sci	Ramos, E
35846: 3 hours						
35859	lecture-discussion	Q4	11:00 AM - 12:15 PM	TR	room 1404 Siebel Center for Comp Sci	Ramos, E
35859: 4 hours						

475 Formal Models of Computation Credit: 3 or 4 hours.

(C S 375) Finite automata and regular languages; pushdown automata and context-free languages; Turing machines and recursively enumerable sets; linear-bounded automata and context-sensitive languages; computability and the halting problem; undecidable problems; recursive functions; Chomsky hierarchy; computational complexity. Same as MATH 475. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 273 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
35895	lecture-discussion	G4	09:30 AM - 10:45 AM	TR	room 1404 Siebel Center for Comp Sci	Pitt, L
35895: 4 hours						

41803	online	ONL	ARRANGED			Pitt, L
41803: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu ; Please see http://online.engr.uiuc.edu/descriptions/fall2004.htm for more details on this course. OnlineAO Tuition 608, AO Tuition 608, AO Fees 36, and AO Fees 36.00 dollars.						
35887	lecture-discussion	UG3	09:30 AM - 10:45 AM	TR	room 1404 Siebel Center for Comp Sci	Pitt, L
35887: 3 hours						

491 Seminar in Computer Science Credit: 0 to 4 hours.

(C S 391) Seminar course for advanced undergraduate and graduate students. Topics will vary. May be repeated to a maximum of 4 hours. May be repeated if topics vary. Prerequisite: Varies with course topic; consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
40557	lecture-discussion	CP	ARRANGED			Peiper, C; Campbell, R
40557: 1 hours Topic: Educational Technologies Seminar.						

492 Senior Project in CS, I Credit: 3 hours.

(C S 292) First part of a project course in computer science. Students work in teams to solve typical commercial or industrial problems. Work involves planning, design, and implementation. Extensive oral and written work is required both on-campus and possibly off-campus at sponsors' locations. Students must enroll for a two term sequence, CS 492 and 493. 3 undergraduate hours. Credit is not given for both CS 492 and a project course in another engineering department for the same project. Prerequisite: Senior standing in CS or consent of instructor.

This course satisfies the General Education Criteria for a Advanced Composition course.

CRN	Type	Section	Time	Days	Location	Instructor
30139	lecture-discussion	CS	03:00 PM - 04:50 PM	W	room 1310 Digital Computer Laboratory	Johnson, R
30139: Advanced Composition course.						

498 Special Topics in CS Credit: 0 to 4 hours.

(C S 397) Lectures in topics of current interest. See Schedule for current topics. May be repeated. Prerequisite: As specified for each topic offering, see Schedule or departmental course description.

CRN	Type	Section	Time	Days	Location	Instructor
40095	laboratory	AB3	02:00 PM - 03:50 PM	R	room 1131 Siebel Center for Comp Sci	Kamin, S
40096	laboratory	AB4	10:00 AM - 11:50	F	room 1131 Siebel	Kamin, S

			AM		Center for Comp Sci	
40098	lecture	AD	09:30 AM - 10:45 AM	TR	room 1111 Siebel Center for Comp Sci	Doan, A
40098: Topic: Machine Learning Approaches to Information Management. Prerequisite: Background in databases or AI preferred, but not required. 3 Undergraduate Hours; 3 or 4 Graduate Hours.						
40092	lecture	AL1	10:00 AM - 10:50 AM	M	room 1214 Siebel Center for Comp Sci	Kamin, S
40092: 3 hoursTopic: Programming Studio. Prerequisite: CS 225.						
31530	lecture	BPB	12:30 PM - 01:45 PM	WF	room 1131 Siebel Center for Comp Sci	Bailey, B
31530: 3 hoursTopic: Principles of User Interface Design, Implementation, and Evaluation. Prereq: CS 225 for CS students; CS 400 for students non-CS majors; or consent of instructor.						
31531	lecture	CXZ	12:30 PM - 01:45 PM	TR	room 1105 Siebel Center for Comp Sci	Zhai, C
31531: Topic: Introduction to Text Information Systems. Prerequisite: CS 225 or CS 400 required. MATH 461or MATH 463 recommended. 3 Undergraduate hours; 3 or 4 Graduate hours.						
42376	lecture	DAF	12:30 PM - 01:45 PM	TR	room 1111 Siebel Center for Comp Sci	Forsyth, D
42376: Topic: Applications of Computer Vision. 3 Undergraduate Hours; 3 or 4 Graduate Hours.						
40109	lecture-discussion	EA	11:00 AM - 12:15 PM	TR	room 1109 Siebel Center for Comp Sci	Amir, E
40109: Topic: Knowledge Representation and Reasoning. Prerequisite: CS 440 recommended; classes on logic and probability recommended. 3 Undergraduate Hours; 3 or 4 Graduate Hours. For more information please see: http://www.cs.uiuc.edu/~eyal/classes/f04/cs498ea/index.html						
42383	lecture	EG	10:00 AM - 11:15 AM	MW	room 1131 Siebel Center for Comp Sci	Gunter, E
42383: Topic: Topics in Automated Deduction. 3 Undergraduate Hours; 3 or 4 Graduate Hours						
42449	lecture-discussion	GG	03:30 PM - 05:00 PM	WF	room 1103 Siebel Center for Comp Sci	Garnett, G
42449: 3 hours3 Hours. Topic: Computing Arts. Meets with Music 404, C.						
31533	lecture	HAN	12:30 PM - 01:45 PM	WF	room 1111 Siebel Center for Comp Sci	Han, J
31533: Topic: An Introduction to Data Warehousing and Data Mining. Prerequisite: CS 225 or CS 400 or consent of instructor. 3 Undergraduate Hours; 3 or 4 Graduate Hours.						

41988	online	IA	ARRANGED			Naldurg, P
41988: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu ; MCS degree students must take this course for 4 hours; Please see http://online.engr.uiuc.edu/descriptions/fall2004.htm for more details on this course. AO Tuition 608, and AO Fees 36.00 dollars.						
42700	lecture-discussion	PGD	ARRANGED			Campbell, R; Woodley, M
42700: 3 hours						
31535	lecture	RHC	02:00 PM - 03:15 PM	TR	room 1320 Digital Computer Laboratory	Naldurg, P
31535: Topic: Information Assurance. Prerequisite: CS 225. 3 Undergraduate Hours; 3 or 4 Graduate Hours.						
42391	lecture	WLH	09:30 AM - 10:45 AM	TR	room 1131 Siebel Center for Comp Sci	Harrison, W
42391: Topic: Architecture and Programming of Communication Processors. Prerequisite: CS 431; Compiler construction knowledge recommended but not required. Credit: 3 Undergraduate Hours; 3 or 4 Graduate Hours.						

499 Senior Thesis in CS Credit: 3 hours.

(C S 299) Research and thesis development experience in computer science. A student works with a faculty member on a mutually agreed upon thesis topic and completes a written thesis. Work involves literature search, oral presentation, analysis and/or implementation, paper preparation, and a written thesis. 3 undergraduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing in CS and consent of instructor.

This course satisfies the General Education Criteria for a Advanced Composition course.

CRN	Type	Section	Time	Days	Location	Instructor
10465	independent study		ARRANGED			
10465: Advanced Composition course. Instructor Approval Required						

523 Advanced Operating Systems Credit: 4 hours.

(C S 423) Advanced concepts in operating system design and coverage of recent research directions. Resource management for parallel and distributed systems. Interaction between operating system design and computer architectures. Topics include: process management, virtual memory, interprocess communication, context switching, parallel and distributed file system designs, persistent objects, process and data migration, load balancing, security, protection. Term projects. Same as CSE 523. Prerequisite: CS 423, 425, and 433; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
41596	online	ONL	ARRANGED			Campbell, R
41596: Online AO Tuition 608, and AO Fees 36.00 dollars.						
41596: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu ; Please see http://online.engr.uiuc.edu/descriptions/fall2004.htm for more details on this course.						

524 Concurrent Prog Lang and Sys Credit: 4 hours.

(C S 424) Introduction to the theory of concurrency and concurrent programming languages. Topics include formal models of concurrent computation such as process algebras, nets and actors; high level concurrent programming languages and their operational semantics; and methods for reasoning about correctness and complexity of concurrent programs. Prerequisite: CS 422; CS 475 or 476.

CRN	Type	Section	Time	Days	Location	Instructor
40477	lecture-discussion	A	02:00 PM - 03:15 PM	TR	room 1105 Siebel Center for Comp Sci	Agha, G

526 Adv Topics in Compiler Constr Credit: 4 hours.

(C S 426) Advanced topics in compiler construction, including incremental and interactive compiling, error correction, code optimization, models of code generators, etc. Same as CSE 526. Prerequisite: CS 426.

CRN	Type	Section	Time	Days	Location	Instructor
30142	lecture-discussion	D	11:00 AM - 12:15 PM	WF	room 1304 Siebel Center for Comp Sci	Padua, D

527 Adv Topics in Software Eng Credit: 4 hours.

(C S 427) Advanced topics in software engineering, including fault-tolerant software, software architecture, software patterns, multi-media software, and knowledge-based approaches to software engineering. Course also includes a number of case studies Same as CSE 529. Prerequisite: CS 428 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
41597	online	ONL	ARRANGED			Johnson, R
41597: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu ; Please see http://online.engr.uiuc.edu/descriptions/fall2004.htm for more details on this course. OnlineAO Tuition 608, and AO Fees 36.00 dollars.						
35912	lecture-discussion	S	02:00 PM - 03:15 PM	TR	room 1310 Digital Computer Laboratory	Johnson, R

541 Computer Systems Analysis Credit: 4 hours.

(C S 441) Development of analytical models of computer systems and application of such models to performance evaluation; topics include scheduling policies, paging algorithms, multiprogrammed resource management, and queuing theory. Same as CSE 524 and ECE 541. Prerequisite: MATH 461 or 463; ECE 413 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
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35921	lecture-discussion	B	09:30 AM - 10:50 AM	MW	room 106B1 Engineering Hall	Sanders, W
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543 **Computer Vision** Credit: 4 hours.
(C S 443) Same as ECE 549. See ECE 549.

CRN	Type	Section	Time	Days	Location	Instructor
40090	lecture-discussion	A	12:30 PM - 01:45 PM	TR	room 1304 Siebel Center for Comp Sci	Ponce, J

545 **Systems Modeling & Simulation** Credit: 4 hours.
(C S 445) Same as BADM 575. See BADM 575.

CRN	Type	Section	Time	Days	Location	Instructor
37926	lecture-discussion	A	10:30 AM - 12:20 PM	TR	room 138 Wohlers Hall	Engelbrecht-Wiggans, R

571 **Combinatorial Mathematics** Credit: 4 hours.
(C S 471) Same as MATH 580. See MATH 580.

CRN	Type	Section	Time	Days	Location	Instructor
33563	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 441 Altgeld Hall	West, D

577 **Coding Theory** Credit: 4 hours.
(C S 477) Same as ECE 556 and MATH 579. See ECE 556.

CRN	Type	Section	Time	Days	Location	Instructor
37138	discussion-recitation	L	08:30 AM - 09:50 AM	TR	room 169 Everitt Elec and Comp Engr Lab	Sarwate, D

578 **Information Theory** Credit: 4 hours.
(C S 478) Same as ECE 563 and STAT 563. See ECE 563.

CRN	Type	Section	Time	Days	Location	Instructor
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37142	discussion-recitation	A	01:30 PM - 02:50 PM	MW	room 112 Transportation Bldg	Viswanath, P
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591 *Advanced Seminar in CS* Credit: 0 to 4 hours.

(C S 491) Seminar on topics of current interest. Subjects will be announced in the Schedule. May be repeated in the same or subsequent terms as topics vary. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
41195	lecture-discussion	AD	ARRANGED			Doan, A
41195: 1 hoursTopic: Readings in Information Management. Prerequisite: Some database or AI background preferred but not required.						
35941	lecture-discussion	AP	ARRANGED			Padua, D; Adve, V
35941: 1 hoursTopic: Advanced Compiler Technology. Prerequisite: CS 426.						
35974	lecture-discussion	BPB	ARRANGED			Bailey, B
35974: 1 hoursTopic: Seminar in Human-Computer Interaction. Prerequisite: None.						
35980	lecture-discussion	CP	ARRANGED			Peiper, C; Campbell, R
35980: 1 hoursTopic: Educational Technologies Seminar.						
41196	lecture-discussion	CXZ	ARRANGED			Zhai, C
41196: 1 hoursTopic: Text Data Mining. Prerequisite: Consent of instructor.						
35972	lecture-discussion	CZ	ARRANGED			Zilles, C
35972: 1 hoursTopic: Architecture Reading Group. Prerequisite: CS 433 or ECE 411 or consent of instructor.						
35937	lecture-discussion	DCS	04:00 PM - 04:50 PM	M	room 1404 Siebel Center for Comp Sci	Chang, K
35937: 1 hoursTopic: Department of CS Research Seminar.						
35967	lecture-discussion	DNR	ARRANGED			Roth, D
35967: 1 hoursTopic: Learning and Knowledge. Prerequisite: Consent of instructor.						
41197	lecture-discussion	EA	ARRANGED			Amir, E
41197: 1 hoursTopic: Advanced Reasoning with Logical and Probabilistic Knowledge. Prerequisite: CS 473, 440 or consent of instructor.						
35949	lecture-	ER	ARRANGED			Ramos, E

	discussion					
35949: 1 hoursTopic: Advanced Topics in Analysis of Algorithms. Prerequisite: CS 473 or CS 475 or consent of instructor.						
35942	lecture-discussion	GAA	ARRANGED			Agha, G
35942: 1 hoursTopic: Topics in Actor Systems. Prerequisite: CS 422 or 524 or permission of instructor.						
36448	lecture-discussion	GHY	ARRANGED			Garland, M; Hart, J; Yu, Y
36448: 1 hoursTopic: Research Topics in Computer Graphics. Prerequisite: Consent of instructor.						
35953	lecture-discussion	HAN	ARRANGED			Han, J
35953: 1 hoursTopic: Data Mining for Advanced Applications. Prerequisite: Machine learning or statistics course or consent of instructor.						
35951	lecture-discussion	HR	ARRANGED			Hart, J; Ramos, E
35951: 1 hoursTopic: Computational Topology.						
35969	lecture-discussion	JT	ARRANGED			Torrellas, J
35969: 1 hoursTopic: Research Topics in Advanced Computer Architecture. Prerequisite: CS 433 or consent of instructor.						
35946	lecture-discussion	KCC	ARRANGED			Chang, K
35946: 1 hoursTopic: Data Data Everywhere: Sensors, Streams and Mobility. Prerequisite: consent of instructor.						
35961	lecture-discussion	LVK	ARRANGED			Kale, L
35961: 1 hoursTopic: Parallel Objects for Resource Management and Fault Tolerance. Prerequisite: consent of instructor.						
35957	lecture-discussion	MH	ARRANGED			Heath, M
35957: 1 hoursTopic: Parallel Algorithms and Software. Prerequisite: Consent of instructor.						
41193	lecture-discussion	MSW	ARRANGED			Winslett, M
41193: 1 hoursTopic: Database and Information Systems Seminar. Prerequisite: Consent of Instructor.						
41194	lecture-discussion	MV	ARRANGED			Viswanathan, M
41194: 1 hoursTopic: Seminar in Formal Methods. Prerequisite: CS 422 or 476 or consent of instructor.						
41977	lecture	PHD	05:00 PM - 05:50 PM	W	room 1404 Siebel Center for Comp Sci	Harandi, M
41977: 1 hoursTopic: Orientation for new PhD students.						

35958	lecture-discussion	REJ	ARRANGED			Johnson, R
35958: 1 hoursTopic: Software Architecture Seminar. Prerequisite: Consent of instructor.						
41614	lecture-discussion	RHC	ARRANGED		room ARR Siebel Center for Comp Sci	Campbell, R
41614: 1 hours Topic: Security Reading Seminar. Prerequisite CS 225 and 423.						
35962	lecture-discussion	RHK	ARRANGED			Kravets, R
35962: 1 hoursTopic: Advanced Topics in Computer Networking. Prerequisite: Consent of instructor.						
35955	lecture-discussion	SHP	ARRANGED			Har-Peled, S
35955: 1 hoursTopic: Computational Geometry Research Seminar. Prerequisite: Consent of instructor.						
35965	lecture-discussion	SRR	ARRANGED			Ray, S
35965: Topic: Artificial Neural Nets and Computational Brain Theory. Prerequisite: Consent of instructor. 1 or 2 hours.						

597 Individual Study Credit: 2 to 16 hours.

(C S 490) Individual study or reading in a subject not covered in normal course offerings. May be repeated. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10467	independent study		ARRANGED			
10467: Instructor Approval Required						

598 Special Topics in CS Credit: 2 to 4 hours.

(C S 497) Lecture course in topics of current interest. See Schedule for current topics. May be repeated. Prerequisite: As specified for each topic offering, see Schedule or departmental course description.

CRN	Type	Section	Time	Days	Location	Instructor
42377	lecture-discussion	CAG	11:00 AM - 12:15 PM	TR	room 1111 Siebel Center for Comp Sci	Gunter, C
42377: 4 hours4 hours Topic: Advanced Topics in Security						
40107	lecture-discussion	DNR	12:30 PM - 01:45 PM	TR	room 1109 Siebel Center for Comp Sci	Roth, D

40107: 4 hoursTopic: Machine Learning in Natural Language Processing						
42393	lecture-discussion	HL	11:00 AM - 12:15 PM	WF	room 1111 Siebel Center for Comp Sci	Luo, H
42393: 4 hours4 Hours. Topic: Wireless Networks and Applications. Prerequisite: CS 438 or equivalent. http://www.cs.uiuc.edu/~haiyun/cs598fall04/						
36015	lecture-discussion	IG	11:00 AM - 12:15 PM	TR	room 1214 Siebel Center for Comp Sci	Gupta, I
36015: 4 hoursTopic: Scattered Systems -- Advanced Topics in Distributed Computing						
40106	lecture-discussion	JCH	02:00 PM - 03:15 PM	WF	room 1214 Siebel Center for Comp Sci	Hart, J
40106: 4 hoursTopic: Shape Modeling. Prerequisite: CS 419.						
42378	lecture-discussion	KGK	11:00 AM - 12:15 PM	WF	room 1105 Siebel Center for Comp Sci	Karahalios, K
42378: 4 hours4 hours Topic: Social Computer Mediated Communication						
36004	lecture-discussion	MJG	02:00 PM - 03:15 PM	TR	room 1214 Siebel Center for Comp Sci	Garland, M
36004: 4 hoursTopic: Digital Geometry Processing.						
36005	lecture-discussion	RHK	02:00 PM - 03:15 PM	WF	room 1302 Siebel Center for Comp Sci	Kravets, R
36005: 4 hoursTopic: Advanced Topics in Network Protocols, Architectures and Applications. Prerequisite: CS 438 or equivalent is required; CS 423 or equivalent is recommended.						
40519	lecture-discussion	SBD	09:00 AM - 11:50 AM	W	room 131 Library and Info Science Bldg	Twidale, M
40519: 4 hoursTopic: Scenario Based Design						
36022	lecture-discussion	SDB	03:30 PM - 04:45 PM	TR	room 1304 Siebel Center for Comp Sci	Bond, S
36022: 4 hoursTopic: Numerical Methods for Biomolecular Simulation. Prerequisite: CS 450 or consent of instructor.						
40105	lecture-discussion	SHP	03:30 PM - 04:45 PM	TR	room 1214 Siebel Center for Comp Sci	Har-Peled, S
40105: 4 hoursTopic: Approximation Algorithms in Geometry. Prerequisite: CS 473 or CS 475.						
40415	lecture-discussion	SRR	02:00 PM - 03:15 PM	R	room 1103 Siebel Center for Comp Sci	Ray, S

40415: 2 hours Topic: Learning with Neural Networks. Prereq: CS 440 or consent of instructor.

36011	lecture-discussion	YYZ	02:00 PM - 03:15 PM	TR	room 1304 Siebel Center for Comp Sci	Zhou, Y
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36011: 4 hours Topic: Information Storage Systems. Prerequisite: CS 423 or equivalent; CS 433, 425, 421 are desired, but not required.

599 **Thesis Research** Credit: 0 to 16 hours.

(C S 499) May be repeated. Approved for S/U grading only. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10469	independent study		ARRANGED			
10469: Instructor Approval Required						