

Cognitive Science Major Classes

KEY: ✓ track requirement

- one option of track requirement
- elective for track

*ULWR distinction depends on semester

**only students who are double majoring with another LSA major may be able to count CogSci courses toward their distribution. Please consult an advisor with questions.

***only required prerequisites are listed in this column, please consult the course guide for advisory prerequisites

SUBJECT	#	SEC	TITLE	CRD	TRACK LIST				LSA REQS	NOTES***
					COMP	DEC	LANG	PHIL		
CMPLXSYS	270		Agent-Based Modeling	3	○	○				
CMPLXSYS	391		Modeling Political Processes	4		○		BS, QR/1	Cross-listed with POLSCI 391	
CMPLXSYS	425		Evolution in Silico	3	○					
CMPLXSYS	501		Introduction to Complex Systems	3	○	○		Non-LSA crd		
CMPLXSYS	511		Theory of Complex Systems	3	○	○		BS		
COGSCI	209		Language and the Human Mind	4	○		☑○	○		Cross-listed with LING 209/PSYCH 242
COGSCI	301		Topics: Topics in Moral Psychology	3		○		○		
COGSCI	302		Topics in Moral Psychology			○		○	ULWR*	Cannot count for students who have taken COGSCI 301 section titled "Topics in Moral Psychology"
COGSCI	445		Machine Learning for NLP	3	☑○		○			Cross-listed with LING 445, prereq - EECS 281 (completed with a minimum grade of C- or better)
COGSCI	497		Directed Research for Cognitive Science	1-3	○	○	○	○		
COGSCI	498		Independent Study for Cognitive Science	1-3	○	○	○	○		
COGSCI	499		Senior Honors Resesarch for Cog Sci	1-3	○	○	○	○		
ECON	395		MicroEcon Topics: Risk and Uncertainty	3		○				prereq - ECON 101 (C- or better)
ECON	398		Strategy	4	○	○			BS	
ECON	409		Game Theory	4		○			BS	prereq - ECON 401 (C- or better)
ECON	490		MicroEcon Topics: Behavioral Econ	3		○				prereq - ECON 401 (C- or better)
ECON	490		MicroEcon Topics: Ethics in Econ Behav	3		○			ULWR*	prereq - ECON 401 (C- or better)
EECS	281		Data Structures and Algorithms	4	✓				BS	prereq - EECS 280 and EECS 203 or MATH 465 or 565 (C or better)
EECS	376		Foundations of Computer Science	4	○				BS	prereq - EECS 280 and EECS 203 or MATH 465 or 565 (C or better)
EECS	442		Computer Vision	4	○				BS	prereq - EECS 281 (C or better)
EECS	445		Introduction to Machine Learning	4	☑○				BS	prereq - EECS 281 and Math 214 or 217 or 296 or 417 or 419 (C or better)
EECS	492		Introduction to Artificial Intelligence	4	☑○				BS	prereq - EECS 281 (C or better); please consult CogSci enrollment guide for enrollment details
EECS	498		Special Topics: Conversational Artificial Intelligence: Principles and Practice of Virtual Assistant AI	4	○					
EECS	498		Special Topics: Reinforcement Learning	3-4	○				BS	
EECS	498		Special Topics: Deep Learning	3-4	○				BS	
EECS	498		Special Topics: Ethics for AI and Robotics	3-4	○	○		○	BS	
EECS	498		Special Topics: Applied Machine Learning for Affective Computing	3-4	○				BS	
EECS	595		Natural Language Processing	3	○		○		BS	Cross-listed with LING 541/SI 561
HISTORY	265		Minds and Brains in America	4				○		
IOE	536		Cognitive Ergonomics and Human Systems Int	3	○	○			BS	non-LSA credit
LING	209		Language and the Human Mind	4	○		☑○	○		Cross-listed with COGSCI 209/PSYCH 242
LING	313		Sound Patterns	3			☑○		ULWR*	
LING	315		Introduction to Syntax	3			☑○		ULWR*	
LING	316		Aspects of Meaning	3			☑○	○	ULWR*	
LING	342		Perspectives of Bilingualism	3			○			
LING	347		Talking Minds	3	○		☑○		BS	Cross-listed with PSYCH 349
LING	351		Second Language Acquisition	3			○		BS	Cross-listed with PSYCH 344
LING	352		Development of Language and Thought	3			○			Cross-listed with PSYCH 352
LING	394		Topics: Speech Errors	3		○	○			
LING	412		Speech Perception	3			○		BS	prereq - LING 313
LING	413		Speech Science	3			○			prereq - LING 313
LING	426		Philosophy & Linguistic Theory	3			☑○		ULWR*	Cross-listed with PHIL 426
LING	440		Language Learnability	3			○			prereq - LING 315
LING	441		Introduction to Computational Linguistics	3	○		○		BS	
LING	442		The Anatomy of Nat Lang	3	○		○			prereq - LING 441
LING	445		Machine Learning for NLP	3	☑○		○			Cross-listed with COGSCI 445, prereq - EECS 281 (completed with a minimum grade of C- or better)
LING	446		Comparative Linguistics	3			○			
LING	447		Psychology of Language	3	○		○	○	BS	prereq - PSYCH 240; Cross-listed with PSYCH 445
LING	492		Topics: Language Variation & Social Cog	3			○			
LING	492		Topics: Perspectives on Bilingualism	3			○			
LING	492		Topics: Intro to Neurolinguistics	3			○			
LING	492		Topics: Topics in Neurolinguistics	3			○			
LING	492		Topics: Sign Language Linguistics	3			○			
LING	492		Topics: Computation and Data Science for Ling	3	○		○			Cross-listed with LING 792
LING	497		Capstone: Speech Perception	3			○			prereq - LING 313
LING	541		Natural Language Processing	3	○		○		BS	Cross-listed with EECS 595/SI 561
MKT	313		Consumer Behavior	3		○			Non-LSA crd	please consult CogSci enrollment guide for enrollment instructions
MO	410		Designing for Collective Intelligence	3		○			Non-LSA crd	Previously POLSCI 489 - topic titled Collective Intelligence
PHIL	303		Symbolic Logic	4	○			☑○	BS, QR/1	
PHIL	305		Introduction to Formal Philosophical Mthds	4				☑○	BS, QR/1	
PHIL	322		Methods of Science	3				☑○		
PHIL	340		Minds and Machines	4	○	○		☑○		
PHIL	345		Language and Mind	4			☑○	○		prereq - one PHIL course (C- or better)
PHIL	356		Issues in Bioethics	4				○		

PHIL	361	Ethics	4		✓		⊙		prereq - one PHIL course (C- or better)	
PHIL	381	Science and Objectivity	4				⊙		prereq - one PHIL course (C- or better)	
PHIL	383	Knowledge and Reality	4		⊙		⊙	RE	prereq - one PHIL course (C- or better)	
PHIL	384	Applied Epistemology	4			⊙	⊙			
PHIL	409	Philosophy of Language	2-3			☑	⊙		last taught in Fall 2013	
PHIL	413	Formal Philosophical Methods	3				☑	BS		
PHIL	414	Mathematical Logic	3		⊙	⊙	⊙	BS, QR/1		
PHIL	426	Philosophy & Linguistic Theory	3			☑	⊙	ULWR*	Cross-listed with LING 426	
PHIL	429	Ethical Analysis	3			⊙			PHIL 361 or 366 or 367 or PPE 300 (C- or better)	
PHIL	443	Foundations of Rational Choice Theory	4		⊙	☑	⊙			
PHIL	444	Groups & Choices	4		☑	⊙	⊙			
PHIL	446	Social and Political Philosophy of Lang	3			⊙	⊙	ULWR*	prereq - one PHIL course; last taught in Winter 2017	
PHIL	450	Philosophy of Cognition	3		⊙		⊙			
PHIL	482	Philosophy of Mind	3		⊙		⊙	☑		
PHIL	485	Philosophy of Action	3			⊙	⊙		last taught in Fall 2015	
POLSCI	391	Modeling Political Processes	4			⊙		BS, QR/1	Cross-listed with CMLXSYS 391	
POLSCI	489	Advanced Topics: Collective Intelligence	3							
POLSCI	490	Game Theory and Formal Models	4			⊙				
PPE	300	Introduction to Political Economy	4			⊙				
PSYCH	240	Introduction to Cognitive Psychology	4		☑	⊙	⊙	☑	BS	prereq - PSYCH 111, 112, 114, 115, or 116
PSYCH	242	Language and the Human Mind	4		⊙		☑	⊙		Cross-listed with COGSCI 209/LING 209
PSYCH	302	Research Methods in Cognitive Neuroscience	3		⊙	⊙	⊙	⊙	BS, ULWR*	prereq - one of STATS 250 OR STATS 280; and one of the following: PSYCH 220, 230, or 240; can only count one of PSYCH 302, 303, 331, or 341 toward CogSci degree
PSYCH	303	Research Methods in Psychology	3		⊙	⊙	⊙	⊙	BS, ULWR*	prereq STATS 250, STATS 280, STATS 425, or MATH 425; and one of PSYCH 230, 240, 250, 260, 270, 280, or 290; can only count one of PSYCH 302, 303, 331, or 341 toward CogSci degree
PSYCH	314	Positive Psychology	3			⊙	⊙	⊙		prereq - PSYCH 111 or 112 or 114
PSYCH	330	Topics: Section titled "Introduction to Neural Circuits"	3		⊙				BS	prereq - PSYCH 230
PSYCH	330	Topics: Section titled "Human Cognitive Evolution"	3		⊙	⊙	⊙	⊙	BS	prereq - PSYCH 230
PSYCH	331	Research Methods in Brain, Behavior, and Cognitive Science	4		⊙	⊙	⊙	⊙	BS, ULWR*	prereq - Completion of STATS 250 or STATS 280 or STATS 425 or MATH 425; and one of the following: PSYCH 230, 240, 335, or 345; can only count one of PSYCH 302, 303, 331, or 341 toward CogSci degree
PSYCH	335	Introduction to Animal Behavior	4			⊙			BS	prereq - PSYCH 111, 112, 114, or 115 OR BIO 162, 163, 171, 172, or 195 OR ANTHRBO 161
PSYCH	341	Advanced Laboratory in Cognitive Psychology	3		⊙	⊙	⊙	⊙	BS, ULWR*	prereq - PSYCH 240 or 245 or 345; and one of the following: STATS 250, STATS 280, STATS 425, or MATH 425; can only count one of PSYCH 302, 303, 331, or 341 toward CogSci degree
PSYCH	343	Cognitive Neuroscience of Learning and Memory	3			⊙			BS	prereq - PSYCH 230 or 240
PSYCH	344	Second Language Acquisition	3				⊙		BS	Cross-listed with LING 351
PSYCH	345	Introduction to Human Neuropsychology	4		☑	⊙		☑	BS	prereq - PSYCH 111, 112, 114, 115, or 116
PSYCH	346	Learning and Memory	3		⊙	⊙			BS	prereq - PSYCH 240 or 345
PSYCH	347	Perception	3		⊙			⊙	BS	prereq - PSYCH 230, 240, or 345
PSYCH	348	Psychology of Thinking	3		⊙	⊙		⊙	BS	prereq - PSYCH 240
PSYCH	349	Talking Minds	3		⊙		☑	⊙	BS	Cross-listed with LING 347
PSYCH	352	Development of Language and Thought	3				⊙			Cross-listed with LING 352
PSYCH	355	Cognitive Development	3		⊙				BS	
PSYCH	360	Behavior and Environment	3			⊙			SS	Cross-listed with EAS 560/ ENVIRON 360/SW 710/ URP 544
PSYCH	389	Psychology & Law	3			⊙				prereq - PSYCH 111, 112, 114, 115, or 116
PSYCH	401	Special Topics: The Science of Happiness	3			⊙		⊙		prereq - PSYCH 111, 112, 114, or 115 - no credit for students who have previously taken PSYCH 314 or PSYCH 476
PSYCH	402	Problems in Psych: Compassionate Brain	3			⊙				prereq - PSYCH 111, 112, 114, or 115
PSYCH	402	Problems in Psych: Decision Making IRL	3			⊙				prereq - PSYCH 111, 112, 114, or 115
PSYCH	440	Advanced Topics: Learning and Memory	3				⊙	BS		prereq - PSYCH 240
PSYCH	443	Creativity	3			⊙		BS		prereq - PSYCH 240
PSYCH	445	Psychology of Language	3		⊙		⊙	⊙	BS	prereq - PSYCH 240; Cross-listed with LING 447
PSYCH	446	Altruism	3			⊙		⊙	BS	prereq - PSYCH 240
PSYCH	447	Topics: Consciousness and Cognition	3					⊙	BS, ULWR*	prereq - PSYCH 230, 240, or 345
PSYCH	447	Topics: Analyzing Language Usage...	3				⊙		BS	prereq - PSYCH 230, 240, or 345
PSYCH	448	Mathematical Psychology	3		⊙	⊙		⊙	BS, QR/2	prereq - sophomore standing or above AND two MATH courses except MATH 105, 110, 127, or 128 OR two STATS courses 200-level or above
PSYCH	449	Decision Processes	3			✓			BS	
PSYCH	487	Topics: Intelligence, Foolishness, & SifCntrl	3			⊙				prereq - PSYCH 111, 112, 114, or 115
PSYCH	644	Computational Modeling of Cognition	3		⊙				BS	
SI	388	Putting the H in HCI: Human Perception, Cogni	4		⊙	⊙				please consult CogSci enrollment guide for enrollment instructions
SI	422	Needs Assessment and Usability Eval	3		⊙					please consult CogSci enrollment guide for enrollment instructions
SI	561	Natural Language Processing	3		⊙		⊙		BS	Cross-listed with EECS 595/LING 541

COURSE INFORMATION					All Off-Track Courses	LSA REQS	NOTES***
SUBJECT	#	SEC	TITLE	CRD			
QMSS	201		Intro to Quantitative Methods in the Social Sciences	4	Off-track courses (courses may not count for on-track credit for any track in the major)		
QMSS	251		Computational Social Sciences	4			
STATS	250		Introduction to Statistics and Data Analysis	4		BS, QR/1	No credit granted to those who have completed or are enrolled in ECON 451, IOE 265, or STATS 280 or STATS 412. Those with credit for STATS 250 receive no credit for STATS 180.
STATS	280		Introduction to Statistics and Data Analysis	4		BS, QR/1	No credit granted to those who have completed or are enrolled in ECON 451, IOE 265, SOC 210, STATS 250 or STATS 412.

Check this list to see courses that have previously been approved to count for CogSci through the course petition process:

<http://myumi.ch/BoZY7>