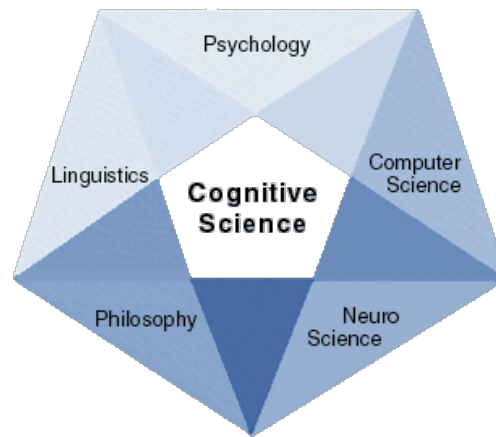


# The Minor in Cognitive Science

Cognitive Science is an interdisciplinary field that studies the brain and mind: the development, underlying processes, and implementation of language, perception, memory, problem-solving, learning, and other intelligent capacities.

Many areas of scholarship - computer science, linguistics, philosophy, psychology, anthropology, sociology, biological sciences, mathematics, economics, and engineering - contribute to the study of Cognitive Science.



Cognitive Science encompasses not just basic research on the brain and mind, but much in the 'technology' sector: everything from automobile dashboard design, to medical technologies such as cochlear implants, to effective advertising, to intuitive software design. While most Cognitive Science is done at Universities (the 2002 Nobel prize in Economics was given to a Cognitive Scientist, Daniel Kahneman, for his work on rationality and decision making), companies like Xerox, Nissan, Boeing, and Microsoft working in ergonomics, human factors, human-machine interfaces, and internet technologies all routinely hire Cognitive Scientists for product design, development and/or testing. For instance, a laboratory at Xerox PARC produced the graphical-user-interface (GUI) and mouse we take for granted, and such labs are currently working on speech- and face-recognition software, intelligent robots, and brain implants that allow the blind to see. Specialization in Cognitive Science will improve one's competitiveness for careers and graduate school in related fields.

The goal of the Cognitive Science Minor is to help students gain both content knowledge and analytical skills. The minor has two required courses - *Introduction to Cognitive Science* (which counts toward the Social/Behavioral distribution requirement) and *Statistics* - as well as a requirement of four electives. Electives are chosen from a list (see back) of courses that are relevant to Cognitive Science. Additionally, students are encouraged to get involved in research through Research Assistantships, Directed Studies, and the Honors program.

## Cognitive Science Minor Requirements

### REQUIRED COURSES [take both]

PSYCH/CS L271 Intro to Cognitive Science

PSYCH Z270 Statistics (or SOCIOL 350, ECON 205, MATH 125, PHYSIC 350)

### ELECTIVE COURSES [choose four] (with restrictions, see below)

PSYCH 201	Intro to Behavioral Research	PHIL 227	Existentialism and Phenomenology
PSYCH 341	Infancy & Childhood Development	PHIL 344	The Philosophy of Mind
PSYCH 350	Learning and Memory	PHIL 345	Theory of Knowledge
PSYCH 355	Perception	PHIL 414	Contemporary Analytic Philosophy
PSYCH 360	Behavioral Neuroscience	PHIL 478/479	Independent Study*
PSYCH 346	Language Development	BIOL 316 or 318	Neurobiology
PSYCH 447	Cognitive Development	BIOL 348	Animal Behavior
PSYCH 450	Cognitive Psychology	BIOL 349	Methods in Ethology
PSYCH 460	Neurophys. Higher Cog Processes	BIOL 352	Evolution
PSYCH 462	Psychopharmacology	BIOL 478/479	Independent Study*
PSYCH 467	Evolution and Behavior	ANTH 105	Introduction to Biological Anthropology
PSYCH 466	Hormones and Behavior	ANTH 210	Biosocial Bases of Human Behavior
PSYCH 455	Adv Topics in Visual Perception	ANTH 281	The Structure of Human Language
PSYCH 476	Expt Methods: Physiological	ANTH 310	Primate Behavior
PSYCH 475	Expt Methods: Learning & Percept.	ANTH 478/479	Directed Study*
PSYCH 486	Research Apprenticeship*	ANTH 490/491	Independent Research*
PSYCH 488/489	Directed Study in Psychology*	LING 201	Introduction to Linguistics
PSYCH 496/497	Honors Research*	LING 203	Speech Sounds and Theory
ECON 351	Economic Philosophy	LING 310	Trans. Syntax: Intro to Chomskyan Ling
CS 110	Introduction to Computing	LING 479	Independent Study*
CS 420	Intro to the Theory of Computation	SOCIOL 101	Introduction to Sociology
CS 470	Intro to Artificial Intelligence	SOCIOL 281	Society and the Individual
CS 478	Independent Study*	SOCIOL 310	Socialization
CS 498	Honors Thesis*	SOCIOL 350L	Methods of Sociological Research
PHIL 120	Introduction to Logic	SOCIOL 440	Society of Knowledge and Ignorance
PHIL 121G	Mind and Reality	SOCIOL 479	Directed Study in Sociology*

### Requirements for the Minor in Cognitive Science

1. The minor requires six courses (two Required and four Elective).
2. At most two 100-level courses may count toward this minor.
3. At least two courses must be taken at the 300-level or above.
4. Only one course from the student's major or other minor may count toward this minor (e.g. a Psych major/minor may only count one Psych course. NOTE: Psych majors/minors should enroll in L271 as a CS course!).
5. The student may count one semester of Directed/Independent Study OR one semester of Research Apprenticeship OR both semesters of Honors Research/Thesis, but the student must seek prior approval from the Cog Sci Program Director; documentation must be provided that the project is related to Cognitive Science.

\* Classes marked with an asterisk may only count if prior approval is granted by the Program Director.

Students may declare the minor by picking up a *Declaration of Minor* form in the Psych department: M-4/204  
Direct questions & research approvals to the Prog. Director: Dr. Erik Blaser, Psychology: [erik.blaser@umb.edu](mailto:erik.blaser@umb.edu)

updated: 3/11/08