**Cognitive Science @ Yale**

# 2022 Undergraduate Major Application

**\*\* Students can apply to enter the major at any point after the freshman year\*\***

**Completion Instructions**

*• Carefully read the description of the major on the third page of this document.*

*• Submit your application by email to both joshua.knobe@yale.edu and fredericka.grant@yale.edu by midnight****,***

***Thursday, December 23rd.***

*• Prof. Knobe will confirm receipt by email within 48 hours; otherwise you should assume that he didn’t receive it.*

*• As described below, a complete application will include (1) this form, (2) your application essay, and (3) your transcript.*

*• You can attach the various components of your application in one file, or as multiple files, as you wish.*

*Direct questions about specific requirements for the major to the DUS, Joshua Knobe, by email (joshua.knobe@yale.edu). Direct general questions about the major to Fredericka Grant (fredericka.grant@yale.edu, 432-4513), who can be found in Kirtland Hall, Room 109.*

**Name**   **Class of** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**College** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Email**\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Proposed Theme:**

Each cognitive science student picks out a ‘theme’ that will be the focus of his or her studies (see page 3 of this document for more details). Please include a proposed theme below.

[*Note*: Although you will have an opportunity to describe your theme in further depth in your attached essay, the actual title of a theme is typically 1-3 words.]

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**Proposed Depth Requirement Courses**

Please list six upper-level courses you propose to take that in some way relate to your theme. List both course numbers and titles**. Note that you are not committing to take these specific courses; we expect that your course list will change as offerings and interests change.**

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**Introductory Course**

As explained in the bluebook, students typically take CGSC 110 (Introduction to Cognitive Science) before applying to the major. List the semester when you took CGSC 110, and the grade you received.

**CGSC 110:** Semester\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade

**Faculty Contacts during Application Review** *(Optional)*

If you would like, please also feel free to include the name of any professor (or at most two) who we could contact for feedback about you during the application review process. (We do *not* want any letters or anything like that at this time — just names of professors that we may choose to contact directly.)

**Transcript and Course List**

As a separate attachment (or appended to this document), please also include a copy of your most current (unofficial) transcript, along with a list of the courses in which you are currently enrolled.

**Application Essay *(Maximum: 1500 words)***

On a separate sheet: (1) Explain the theme that will provide cohesion and integration to your course plan; (2) Discuss why this theme is best explored within the cognitive science major, instead of a major in one of the component disciplines (e.g. Psychology, Computer Science, Philosophy, Linguistics). For advice and sample themes, see *https://cogsci.yale.edu/*

[*Note*: For this application essay, you do not need to write in a general way about your passion for cognitive science. The aim is rather to provide specific information about your particular proposed theme.]

**Requirements of the Cognitive Science Major**

The goal of cognitive science, stated simply, is to understand how the mind works. Cognitive science is an inherently interdisciplinary endeavor, drawing on tools and ideas from fields such as psychology, computer science, linguistics, philosophy, and neuroscience. Approaches include empirical studies of the ontogenetic and phylogenetic development of cognitive abilities, experimental work on cognitive processing in adults, attempts to understand perception and cognition based on patterns of breakdown in pathology, computational and robotic research that strives to simulate aspects of cognition and behavior, neuroscientific investigations of the neural bases of cognition using neural recording and brain scanning, and the development of philosophical theories of the nature of mind.

**Requirements of the major**   Thirteen course credits are required for the major, including the introductory courses.

*Introductory course.*An introductory survey course, CGSC 110, is normally taken by the end of the fall term of the sophomore year and prior to admission to the major.

*Breadth requirement*. To provide a broad introduction to the sub-fields of Cognitive Science, every student is required to take four “breadth” courses drawn from any four of the following six areas. No more than one course per area can count for the breadth requirement.

Computer Science: CPSC 201

Economics/decision making: ECON 159; PSYC 553

Linguistics: LING 110, 116, 117, 130, 149, 232, 253, CGSC 216

Neuroscience: PSYC 120, 160, 170, 230, 270, 337; MCDB 132, 320, CGSC 201

Philosophy: PHIL 126, 182, 182, 269, 270, 271, 272, 305

Psychology: PSYC 110, 140, 304, 315, CGSC 304

*Depth requirement*. Each student picks a particular ‘theme’ that will guide his or her studies in cognitive science. Students are required to take six additional courses that focus on this theme. These courses will typically be drawn from the areas of computer science, economics, linguistics, neuroscience, philosophy, and psychology, but – in consultation with the DUS – they may also be drawn from other fields when this is necessary to explore the student’s focal topic. In all cases, the courses must be chosen from at least two disciplines.

All of these courses must be “upper-level.” For most disciplines, this is 300-level or above, though for some (such as philosophy), 200-level courses can count. With permission of the DUS, up to two directed research courses can count for the depth requirement. One depth requirement course may be replaced by taking CGSC 390. Courses taken Credit/D/Fail may not be counted toward the requirements of the major, except with permission of the DUS.

*Skills requirement*. Because formal techniques are fundamental to cognitive science, one “skills” course is required, preferably prior to the senior year. Such courses include CPSC 112, 202; LING 200, 224, PSYC 200, 230 235, 270. (Other such courses might be included with permission of the DUS.)

*Junior requirement*. In the junior year, students are required to take the broad survey half-credit course in cognitive science (CGSC 395).

*Senior requirement*.In the spring semester of the senior year, students are required to take a capstone course, in which they will discuss current work in cognitive science and their own developing research projects (CGSC 491).

In the fall term of the senior year students begin researching and writing a senior essay under the guidance of an appropriate faculty member in an area of cognitive science. In the spring term students complete the senior essay. Throughout the senior year, students meet regularly with one another and with the faculty in the context of this course to discuss current work in cognitive science and their own developing research projects. This senior essay is required and is graded as part of CGSC 491.