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INDIVIDUALIZED MAJOR IN COGNITIVE SCIENCE

The Individualized Major in Cognitive Science is administered through the Rutgers Center for Cognitive Science (RuCCS). It offers an opportunity for exceptional, creative, self-motivated students to explore innovative and multi-disciplinary approaches to the study of the foundational and computational workings of the mind. Satisfactory completion of the Individualized Major leads to a <u>Bachelor of Arts degree</u>.

The major must consist of **at least 36 credits**, distributed as follows**:**

1. One of the following courses: 185:201 (Cognitive Science: A Multi-disciplinary Intro) **and/or** 185:301 (Cognition and Decision Making) **and/or** 185:310 (The Concept of Concepts in Cognitive Science) **and/or** 185:320 (Research Methods in Cognitive Science) **and/or** 185:410 (Language and Cognition **and/or** 185:411 (Advanced Topics in Cognitive Science). See course descriptions at the bottom of the page.
2. At least one formal/analytic requirement. For courses that automatically satisfy the requirement, click here.
3. A minimum of 3 credits of cognitive science research directed by the student's primary faculty advisor, 185:495 Research in Cognitive Science. Students may also fulfill this requirement via Departmental Honors or College Honors courses.
4. Two thirds of the total credits must be from courses offered by the School of Arts and Sciences.
5. Three fourths of the total credits must be at the 300-level or above.

Students should select from one of four possible tracks: **Cognitive Neuroscience, Generalist, Language,** and **Vision**. Each track has course recommendations for fulfilling the requirements of the Individualized Major.

Applying for the Individualized Major in Cognitive Science:

1. Select from **one of the 4 tracks** (listed above).
2. Find a **primary faculty advisor**, who will help you develop your application and oversee your required research course in your Junior or Senior year. For a list of faculty affiliated with the Center click **here**.
3. Submit a **written application** no later than the <u>first term of your junior year.</u> (Part-time and transfer students may extend this deadline to completion of 75 credits.)

The application can be downloaded at the following address:
http://ruccs.rutgers.edu/ruccs/images/downloads/individualized%20major.pdf

Your application must include:

1. 1-page Statement of Purpose and Learning Goals describing your academic objectives and clearly explaining why they cannot be accomplished within the current structure of majors, minors, and electives open to SAS students.

2. Proposed listing of courses you intend to complete and the semester when the student intends to take the courses. Include short lists of "elective courses" within the major from which you will choose a set number. For example, you can list six specific courses and indicate that you will take a minimum of four courses from that list.

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3. **Signature of your primary faculty advisor** who will direct your research course.

4. The approval and signatures of the Undergraduate Director (2nd signature) and Director of the Center (3rd signature).

5. The approval and signature of the SAS Dean for Educational Initiatives and the Core Curriculum (Susan Lawrence) or the Vice Dean for Undergraduate Education (Michael Beals). Their offices are located at 35 College Avenue.

To contact the Undergraduate Director, Dr. Mary Rigdon, email undergrad@ruccs.rutgers.edu

Description of Courses Offered by Cognitive Science

185:201 Cognitive Science: A Multi-disciplinary Introduction (4 credits) is a lecture/recitation course taught by a single instructor. This course introduces students to the diverse set of concepts and formal and experimental techniques used in cognitive science.

185:301 Cognition and Decision Making (4 credits) is a lecture/recitation course taught by a single instructor. This course introduces students to the subjects of reasoning and decision-making as a means of exploring a number of issues central to the field of cognitive science.

185:310 The Concepts of `Concepts' in Cognitive Science (3 credits) is a lecture course taught by a single instructor. This course introduces students to the study of concepts from a broad interdisciplinary point of view, surveying how concepts are understood in Psychology, Philosophy, Computer Science and Neuroscience. Emphasis is on both differences in how thee various disciplines view concepts as well as commonalities in the underlying ideas.

185:320 Research Methods in Cognitive Science (3 credits) is a lecture course taught by a single instructor. This course introduces students to a foundation for thinking critically about research in cognitive science. Topics may include the scientific method and consideration of strengths and weaknesses of a range of approaches, statistical reasoning and principles for ethical conduct of research.

185:410 Language and Cognition (3 credits) is a lecture course taught by a single instructor. Topics may include speech perception, language acquisition, priming, disorders, speech errors, sentence processing, memory, color, and numerosity.

185:411 Advanced Topics in Cognitive Science (4 credits) is a seminar course team-taught by faculty affiliated with the Center for Cognitive Science. Faculty from psychology, computer science, linguistics, philosophy, and cognitive science will give single seminars in which they show how these diverse set of concepts and formal and experimental techniques are used to address a particular problem within cognitive science.

185:495/496 Research in Cognitive Science (3 credits) is a supervised research experience or independent study. May include library or laboratory research. Written agreement with supervisor and final written report required.