# Curriculum Planner: COGNITIVE NEUROSCIENCE CONCENTRATION - Fall 2018/Spring 2019

<table>
<thead>
<tr>
<th>Name</th>
<th>UIN</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Introductory/Foundation Core Courses

### Psychology [choose one]
- PSYC 100 – Intro to Psych
- PSYC 103 – Intro Experimental Psych

### Statistics [choose one]
- PSYC 235 – Intro to Statistics or equivalent
  - Equivalent Courses: STAT 100, 200, 212, 400; ECON 202, 203; EPSY 280, 480; SOC 280; ACE 261; CHLH 244; PS 230; UP 116; SOCW 225
  - These equivalent courses meet the statistics requirement but do not count toward PSYC hours

## 200-Level Foundation Courses

### Biological/Cognitive [choose one]
- PSYC 210 – Behavioral Neuroscience (FA18/SP19)
- PSYC 224 – Cognitive Psych (FA18/SP19)
- PSYC 230 – Perception (FA18/SP19)
- PSYC 248 – Learning and Memory (FA18/SP19)

### Clinical/Developmental/Organization/Personality/Social [choose two]
- PSYC 201 – Intro to Social Psych (FA18/SP19)
- PSYC 207 - Prejudice & Discrimination (SP19)
- PSYC 216 – Child Psych (FA18/SP19)
- PSYC 238 – Psychopath & Prob Living (FA18/SP19)
- PSYC 239 – Community Psych (FA18/SP19)
- PSYC 245 – Industrial/Org Psych (FA18/SP19)
- PSYC 250 – Psych of Personality (FA18/SP19)

## Concentration Courses

### 200-Level Core [choose one]
- PSYC 204 – Intro to Brain & Cognition (FA18)
- PSYC 220 – Images of Mind (not offered FA18 or SP19)

### Research Methods [choose one]
- PSYC 445 – Cognitive Neuroscience Lab (SP19)

### Concentration Electives [choose four]
- PSYC 204 or 220 if not used as “200-level Core”
- PSYC 302 – Applied Neuroscience (SP19)
- BCOG 301/PSYC 396 – Intelligence & Brain (SP19)
- PSYC 396 – “Neuropsych & Neuroanatomy (FA18)
- PSYC 402 – Intro. Clinical Neuropsychology (SP19)
- PSYC 403 – Memory and Amnesia (FA18)
- PSYC 404 – Cognitive Neuroscience (SP19)
- PSYC 421 – Principles of Psychopathology (FA18)
- PSYC 427 – Language and the Brain (SP19)
- PSYC 433 – Evolutionary Neuroscience (FA18)
- PSYC 453 - Cognitive Neuroscience of Vision (FA18)
- PSYC 494 – Advanced Research*
- PSYC 496 – “Prac. Issues Emotion Research” (SP19)

* A maximum of three (3) hours of PSYC 494, Advanced Research, conducted in a Cognitive Neuroscience Psychology lab, may be used as an elective course

## Advanced (300/400) Hour Requirement 21 hours

- PSYC 445 – Cognitive Neuroscience Lab 4 hrs
- Concentration Electives 12 hr
- Additional 300/400 courses (any subject, including PSYC) ≥5 hrs
- 21 hrs

## UIUC/LAS General Education

### Composition I
- Advanced Composition

### Quantitative Reasoning (2 courses)
- 1. PSYC statistics or equivalent (3 hrs)
- 2.

### Western/Comparative Culture(s) (1 course)
- Non-Western Culture(s) (1 course)

### US Minority Cultures (1 course)
- Humanities and the Arts (6 hours)
- 1.
- 2.

### Social and Behavioral Sciences (6 hours)
- 1. Introductory Psychology (4 hrs)
- 2.

### Natural Sciences and Technology (6 hours)
- 1.
- 2.
Cognitive Neuroscience Concentration

Study of how and where higher-level cognitive abilities are processed in the brain

Requires 35 hours of "PSYC" coursework plus an approved statistics course. Minimum thirteen (13) hours of PSYC 300/400-level credit required (includes lab/research methods course).

<table>
<thead>
<tr>
<th>Introductory/Foundation Courses</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Psychology – choose one</strong></td>
<td>PSYC 235 - Intro to Statistics or equivalent*</td>
</tr>
<tr>
<td>PSYC 100 - Intro to Psych</td>
<td>Equivalent Courses – STAT 100, 200, 212, 400; ECON 202, 203; EPSY 280, 480; SOC 280: ACE 261; CHIH 244; PS 230; UP 116; SOCW 225</td>
</tr>
<tr>
<td>PSYC 103 - Intro Experimental Psych</td>
<td>(Equivalent courses meet the statistics requirement but do not count toward PSYC hours)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biological/Cognitive – choose at least one</th>
<th>200-Level Foundation Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 210 - Behavioral Neuroscience – Survey of current knowledge and speculation regarding the brain's role in perception, motivation, sexual behavior, thinking, memory, and learning, based upon human clinical data and research in animal models.</td>
<td><strong>Clinical/Develop/Organizational/Personality/Social – choose two</strong></td>
</tr>
<tr>
<td>PSYC 224 - Cognitive Psychology – Introduction to the psychological study of human information processing and memory; acquisition, retrieval, and forgetting; and general knowledge, concepts, reasoning, and related issues in cognition.</td>
<td>PSYC 201 - Intro to Social Psych – Systematic study of social factors in individual and group behavior; attention to social perception, motivation, and learning; attitudes, norms, and social influence processes; the development and dynamics of groups; and the effects of social and cultural factors on the individual.</td>
</tr>
<tr>
<td>PSYC 230 - Perception &amp; Sensory Processes – Experimental psychology of sensory and perceptual processes and behavior; emphasis on the contribution of behavior science to understanding subjective experience of the physical and social environment.</td>
<td>PSYC 207 – Psychology of Prejudice and Discrimination – Examines the psychological causes and social consequences of prejudice and discrimination in society. Topics include stereotyping, cognitive biases, group conflict, ideology, implicit associations, subtle and benevolent forms of prejudice.</td>
</tr>
<tr>
<td>PSYC 248 - Learning and Memory – Survey of basic phenomena in learning and memory emphasizing experimental data from animal &amp; human research.</td>
<td>PSYC 216 – Child Psychology – Study of the psychological development of the child.</td>
</tr>
<tr>
<td><strong>Concentration Courses</strong></td>
<td>PSYC 238 – Psychopathology and Problems in Living - Conceptions/facts about disordered behavior, including psychoses, neuroses &amp; other patterns of psychological disturbance.</td>
</tr>
<tr>
<td><strong>Core – choose at least one</strong></td>
<td>PSYC 239 - Community Psych - Redefines human and social problems and the implications for social programs and policies; reviews the historical antecedents, conceptual models, strategies and tactics of social and community programs; and employs examples from criminal justice, education, employment, and mental health.</td>
</tr>
<tr>
<td>PSYC 204 - Intro to Brain and Cognition - Concerned with how the cognitive systems support a broad range of capacities including memory, attention, and social and emotional processing, arise from the functioning of specific brain modules/mechanisms.</td>
<td>PSYC 245 - Industrial Org Psych - Systematic study of the application of psychological methods and principles in business and industry; emphasis on personnel selection and factors influencing efficiency.</td>
</tr>
<tr>
<td>PSYC 220 - Images of Mind - Intro to neuroimaging/ cognitive neuroscience, with emphasis on critically evaluating neuroscience in the media.</td>
<td>PSYC 250 - Psych of Personality - Study of personality from various points of view: biological, experimental, social, and humanistic; surveys theory and empirical research in the study of personality.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Electives - choose four</th>
<th>Research Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 204 or PSYC 220 – if not used in “Core” above.</td>
<td>PSYC 445 – Cognitive Neuroscience Lab - Principles underlying scanning of the brain using functional Magnetic Resonance Imaging (fMRI). The lectures introduce how to use an MRI scanner, the basic biophysics that makes functional imaging possible, experimental design for fMRI, and basic data analysis.</td>
</tr>
<tr>
<td>PSYC 396 - Intermediate Topics in Psychology</td>
<td>PSYC 421 – Principles of Psychophysiology - Theoretical/practical aspects of human psychophysiology: measurement techniques/application of principles to problems in developmental, clinical, social, and experimental psych.</td>
</tr>
<tr>
<td>[BCOG 300] Intelligence of the Brain – Study of human intelligence, with particular emphasis on modern research in cognitive neuroscience.</td>
<td>PSYC 427 – Language and the Brain - Neuroanatomy of language; neuroimaging of language; language disorders; brain lateralization for language; bilingualism and the brain; sign language and the brain.</td>
</tr>
<tr>
<td>Neuroscience in the Real World - Examine the neuroscience of daily life especially as it pertains to mental health</td>
<td>PSYC 433 – Evolutionary Neuroscience - Current methods, tools, progress in evolutionary biology/quantitative genetics of vertebrate brain/behavior.</td>
</tr>
<tr>
<td>PSYC 403 – Memory and Amnesia - Coverage will include studies of amnesia and other circumscribed memory impairments in human patients, taken from the scientific literature, which will be compared to the descriptions of amnesia in movies, literature, and the media.</td>
<td>PSYC 450 - Cognitive Psychophysiology - Survey of the theory and practice of using recordings of brain electrical activity to study normal/abnormal perception, attention, decision-making, memory, response preparation, and language.</td>
</tr>
<tr>
<td>PSYC 404 – Cognitive Neuroscience - Examination of research concerned with identifying and characterizing the cognitive systems supporting such capacities as memory, attention, and visual processing, and with understanding how such cognitive activities arise from the functioning of specific brain modules and brain mechanisms.</td>
<td>PSYC 453 – Cognitive Neuroscience of Vision - Overview of the neuroscience of the visual system, the eye and subcortical structures, with a focus on the visual cortex and higher-level vision (e.g. attention and object perception).</td>
</tr>
</tbody>
</table>