Department of Psychology

Michael Tarr, Department Head
Erik Thiessen, Director of Undergraduate Education in Psychology
Baker Hall 342D
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http://www.cmu.edu/dietrich/psychology/index.html

Can newborn infants perceive the world as we do, or is it just "a blooming buzzing confusion"? Do personality, beliefs and social factors influence health? How do scientists and young children make discoveries, and what abilities make these insights possible? How does brain activity reveal differences in thinking? Can computers think the way people do?

These are some of the questions that psychologists at Carnegie Mellon are trying to answer.

For the student who is majoring in Psychology, Cognitive Science or Neuroscience, studying with faculty who are on the leading edge of research on questions like the above can be a very exciting experience.

The Psychology Department at Carnegie Mellon has long been noted as one of the pioneering Psychology Departments in the world, particularly in such areas as cognitive psychology, cognitive science, social psychology, developmental psychology, cognitive neuroscience, and health psychology. The Psychology Department offers 5 majors: B.A. and B.S. degrees in Psychology, as well as a B.S. degree in Cognitive Science and together with the Department of Biological Sciences, a unified B.S. double major in Psychology and Biological Sciences, and an Intercollege major in Neuroscience.

The Major in Psychology

Psychology is a discipline that embraces both biological and social sciences. It is a science concerned with establishing principles and laws regarding the ways in which people think and behave through the scientific study of human behavior.

The orientation of the Carnegie Mellon Psychology curriculum is toward developing highly skilled and knowledgeable graduates. About half of our graduates go on to graduate or professional school. The remainder seek to expand their problem-oriented analytic skills to qualify themselves for job opportunities beyond those typically open to liberal arts students.

Majors in the department are expected not only to learn about findings already established by psychologists, but also to become proficient in the investigation and analysis of behavior. This includes observing behavior, formulating hypotheses, designing experiments to test these hypotheses, running experiments, performing statistical analysis, and writing reports. The department has many resources for students to use in acquiring these skills. For instance, students interested in child development may be involved in the child development laboratory and observational facilities which are a part of the Carnegie Mellon Children's School which operates under the department's aegis. Students interested in health or clinical psychology might have opportunities to do internships in applied settings, and all Psychology majors have access to extensive computer facilities for data analysis and simulation work. The department also has a state of the art set of undergraduate research facilities which are a part of the Carnegie Mellon Children's School which operates under the department's aegis.

In addition to formal class work, students are encouraged to participate in elective research projects where they may register and receive credit for freshmen research experience course, 85-506 Readings in Psychology, Fall research experience in 85-507 Research in Psychology or Spring research experience in 85-508 Research in Psychology. In the research in psychology course, the student may work on an ongoing research projects or develop and carry out a new research project with a faculty member. There is university and departmental funding available to help support student-initiated research projects and student travel to present research results at scientific meetings and conferences. In the Readings courses, the student reads extensively on a particular topic. The faculty member and student meet to discuss the readings, and the student writes a paper on the topic selected. The Psychology Department Website (http://www.cmu.edu/dietrich/psychology), provides descriptions of faculty research interests (http://www.cmu.edu/dietrich/psychology/research-areas) that the student can use in determining who should be approached to supervise a particular research or reading project.

Students interested in gaining field work experience via a number of internship opportunities available to them can receive credit through 85-482 Internship in Psychology, 85-480 Internship in Clinical Psychology or 85-484 Practicum in Child Development. Clinical internships are available with a variety of clinical settings including the prestigious Western Psychiatric Institute and Clinic (the teaching hospital of the Department of Psychiatry at the University of Pittsburgh Medical School). During the internship, students get first-hand experience with different clinical populations. Developmental Practicum experience is available in the department-run CMU Children's School (http://www.cmu.edu/dietrich/psychology/centers-and-facilities).

Psychology Curriculum

Mathematics 19-20 units
21-111-21-112 Differential Calculus - Integral Calculus 20
or
21-120-21-122 Differential and Integral Calculus - Integration and Approximation 20
or
21-120-21-256 Differential and Integral Calculus - Multivariate Analysis 19

*Students who place out of 21-120 with AP credit are only required to successfully complete 21-122 or 21-256 instead of the full two semester sequence.

*21-124 may be substituted for 21-122 for those interested in Neuroscience or Biology.

Statistics Sequence 18 units
36-201 Statistical Reasoning and Practice 9
36-309 Experimental Design for Behavioral and Social Sciences 9

*In certain circumstances, 36-202 can be a substitute for 36-309 with prior approval.

Breadth Requirement 36 units
85-102 Introduction to Psychology 9
85-211 Cognitive Psychology 9
or 85-213 Human Information Processing and Artificial Intelligence 9
85-219 Biological Foundations of Behavior 9
85-221 Principles of Child Development 9
85-241 Social Psychology 9
85-251 Personality 9

* A fourth survey course can be taken in place of Introduction to Psychology

Research Methods* 18 units
Complete two courses.
85-310 Research Methods in Cognitive Psychology 9
85-314 Cognitive Neuroscience Research Methods 9
85-320 Research Methods in Developmental Psychology 9
85-330 Analytic Research Methods 9
85-340 Research Methods in Social Psychology 9

* Prerequisites for all Research Methods courses: 36-309 or equivalent, and corresponding survey course.

Advanced Courses 18 units
Advanced psychology courses exist within four areas (cognitive, cognitive neuroscience, developmental, social and health psychology.) Any advanced content course or seminar in psychology or any psychology course higher than 85-330.


Computer Science Requirement 10 units
15-110 Principles of Computing 10

Natural Science Requirement (B.A. 18 units, B.S. 36 units, both of which include 9 units of GenEd Science)

The Psychology major requires (for B.S. candidates) three additional natural science courses (with two in the same science) beyond the College's General Education natural science requirement. For the B.A. the requirement is one course beyond the General Education requirement in natural science.

These courses can be selected from the following areas:
Major in conjunction with their Psychology advisor's approval.

For Psychology majors who wish to have a focus of their study be on Cognitive Neuroscience, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

**Cognitive-Neuroscience Concentration**

For Psychology majors who wish to have a focus of their study be on Cognitive Neuroscience, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **85-310** Research Methods in Cognitive Psychology
- **85-314** Cognitive Neuroscience Research Methods

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-356** Music and Mind: The Cognitive Neuroscience of Sound
- **85-370** Perception

**Developmental Psychology Concentration**

For Psychology majors who wish to have a focus of their study be on Developmental Psychology, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **85-320** Principles of Child Development
- **85-321** Modern Biology

As part of the psychology Breadth requirement:

- **85-211** Cognitive Psychology
- **85-241** Research Methods in Cognitive Psychology

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-356** Infant Language Development
- **85-363** Attention, Its Development and Disorders

As part of the psychology Research Methods Requirement:

- **85-370** Perception
- **85-385** Auditory Perception: Sense of Sound

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-395** Human Memory
- **85-406** Autism: Psychological and Neuroscience Perspectives

As part of the B.S. science requirement:

- **85-356** Autism: Psychological and Neuroscience Perspectives
- **85-363** Attention, Its Development and Disorders
- **85-370** Perception

**Health-Psychology Concentration**

For Psychology majors who wish to have a focus of their study on Health Psychology, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **85-210** Biological Foundations of Behavior
- **85-241** Social Psychology

As part of the psychology Breadth requirement:

- **85-353** Mindfulness: Science and Practice
- **85-442** Health Psychology

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-353** Mindfulness: Science and Practice
- **85-446** Psychology of Gender

As part of the psychology Research Methods requirements:

- **85-340** Research Methods in Social Psychology

As part of the B.S. science requirement:

- **03-121** Modern Biology

As part of the psychology Research Methods Requirement:

- **85-211** Cognitive Psychology
- **85-241** Research Methods in Cognitive Psychology

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-356** Music and Mind: The Cognitive Neuroscience of Sound
- **85-395** Human Memory

**Cognitive Psychology Concentration**

For Psychology majors who wish to have a focus of their study be on Cognitive Psychology and/or Cognitive Modeling, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **03-121** Modern Biology
- **85-241** Social Psychology

As part of the B.S. science requirement:

- **85-356** Autism: Psychological and Neuroscience Perspectives
- **85-363** Attention, Its Development and Disorders

As part of the psychology Breadth requirement:

- **85-370** Perception
- **85-385** Auditory Perception: Sense of Sound

As part of the psychology Research Methods requirement:

- **85-395** Human Memory
- **85-406** Autism: Psychological and Neuroscience Perspectives

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-421** Cognitive Modeling
- **85-425** Child Psychopathology and Treatment

As part of the psychology Research Methods Requirement:

- **85-425** Child Psychopathology and Treatment
- **85-426** Learning in Humans and Machines

**Social-Personality Psychology Concentration**

For Psychology majors who wish to have a focus of their study be on Social and/or Personality Psychology, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

As part of the psychology Breadth requirement:

- **85-356** Music and Mind: The Cognitive Neuroscience of Sound
- **85-370** Perception

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**Concentrations within the Psychology Major**

Students who wish to focus their Psychology program on a specific area can do so either by the careful selection of Psychology elective courses focusing on their area of interest or by pursuing one of the following concentrations. Students must obtain a concentration form from the Undergraduate Program Coordinator, Emilie O'Leary, receive approval from their psychology faculty advisor, then returning the signed copy to Emilie in Baker Hall 339. The completion of a concentration will be recognized in the Psychology Graduation Brochure.

**Health-Psychology Concentration**

For Psychology majors who wish to have a focus on their study on Health Psychology, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **85-353** Mindfulness: Science and Practice
- **85-442** Health Psychology
- **85-446** Psychology of Gender
- **85-501** Stress, Coping and Well-Being

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-356** Music and Mind: The Cognitive Neuroscience of Sound
- **85-370** Perception

**Cognitive-Neuroscience Concentration**

For Psychology majors who wish to have a focus of their study be on Cognitive Neuroscience, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **85-340** Research Methods in Social Psychology
- **85-353** Mindfulness: Science and Practice
- **85-446** Psychology of Gender
- **85-501** Stress, Coping and Well-Being

**Developmental Psychology Concentration**

For Psychology majors who wish to have a focus of their study be on Developmental Psychology, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **85-321** Modern Biology
- **85-211** Cognitive Psychology
- **85-241** Research Methods in Cognitive Psychology

As part of the psychology Research Methods Requirement:

- **85-356** Autism: Psychological and Neuroscience Perspectives
- **85-363** Attention, Its Development and Disorders

As part of the advanced coursework in psychology requirement, at least two of the following:

- **85-356** Music and Mind: The Cognitive Neuroscience of Sound
- **85-395** Human Memory

**Cognitive Psychology Concentration**

For Psychology majors who wish to have a focus of their study be on Cognitive Psychology and/or Cognitive Modeling, the following courses should be selected as part of their Psychology Major in conjunction with their Psychology advisor's approval.

- **03-121** Modern Biology
- **85-241** Social Psychology

As part of the B.S. science requirement:

- **03-121** Modern Biology

As part of the psychology Breadth requirement:

- **85-320** Principles of Child Development
- **03-364** Developmental Neuroscience
Carnegie Mellon University recently launched BrainHub—an initiative designed to leverage its core strengths in cognitive science, engineering, and computer science, and our emerging excellence in biological sciences, to harness the technology that helps the world explore brain and behavior. Students will be able to take advantage of exciting opportunities such as lectures hosted on various topics, newly funded CMU campus research projects trying to answer pressing questions in brain science and the many global partnerships with other institutions all with the same motivating goal to enhance and increase research in brain sciences.

Finally, for any interested student, there is a Minor in Cognitive Neuroscience (p. 5) available through the Psychology department.

### Neuroscience Major

The Psychology Department at Carnegie Mellon University has a major focus on the role of the brain and nervous system in cognition and behavior, including biological approaches involving the health impact that arises from the interaction of behavior with the nervous, endocrine, and immune systems. These interests are manifested in faculty research (http://www.cmu.edu/dietrich/psychology/research-areas), departmental and university centers that operate from or heavily involve the department (e.g., the Center for Cognitive Brain Imaging (http://www.ccbi.cmu.edu), and the Center for the Neural Basis of Cognition (http://www.cnbc.cmu.edu)) as well as undergraduate coursework (http://www.cmu.edu/dietrich/psychology/undergraduate) and graduate coursework.

For undergraduates, there are a number of ways in which students with an interest in these approaches can pursue that interest in an organized fashion. Major requirements for the Bachelor of Science in Neuroscience can be found under Intercollege Programs (http://coursecatalog.web.cmu.edu/servicesandoptions/intercollegeprograms/#bachelorscienceinneurosciencetext).

Carnegie Mellon University recently launched BrainHub—an initiative designed to leverage its core strengths in cognitive science, engineering, and computer science, and our emerging excellence in biological sciences, to harness the technology that helps the world explore brain and behavior. Students will be able to take advantage of exciting opportunities such as lectures hosted on various topics, newly funded CMU campus research projects trying to answer pressing questions in brain science and the many global partnerships with other institutions all with the same motivating goal to enhance and increase research in brain sciences.

Finally, for any interested student, there is a Minor in Cognitive Neuroscience (p. 5) available through the Psychology department.
Neurosciences
Decision Sciences
Linguistics
Philosophy
Psychology

requirements can not be double counted in the concentration. and the focus may vary across disciplinary boundaries. Courses taken for the major required to be within any single category below but be coherent within the major courses. Courses not represented on the list may, with pre-approval of advisor and Hall 339, with a description of the concentration area and the planned set of three courses. In the current Undergraduate Catalog. Before proceeding with the choice of courses, area of concentration from the course list under "Cognitive Science Concentration". These three courses are chosen in conjunction with your advisor to form a coherent (3 courses, concentration approval required)

Cognitive Science Concentration
(3 courses, concentration approval required)

These three courses are chosen in conjunction with your advisor to form a coherent area of concentration from the course list under "Cognitive Science Concentration" in the current Undergraduate Catalog. Before proceeding with the choice of courses, students must fill out the concentration form, obtained from Emile O’Leary in Baker Hall 339, with a description of the concentration area and the planned set of three courses. Courses not represented on the list may, with pre-approval of advisor and department, be used to satisfy part of this requirement. The three courses are not required to be within any single category below but be coherent within the major and the focus may vary across disciplinary boundaries. Courses taken for the major requirements can not be double counted in the concentration.

Computer Science 36 units
16-385 Computer Vision 9
15-453 Formal Languages, Automata, and Computability 9
10-601 Introduction to Machine Learning (Master's) 12
05-410 User-Centered Research and Evaluation 12
05-432 Personalized Online Learning 12

Psychology
85-219 Biological Foundations of Behavior 9
85-352 Evolutionary Psychology 9
85-354 Infant Language Development 9
85-370 Perception 9
85-375 Crosscultural Psychology 9
85-380 In Search of Mind: The History of Psychology 9
85-390 Human Memory 9
85-392 Human Expertise 9
85-395 Applications of Cognitive Science 9
85-406 Autism: Psychological and Neuroscience Perspectives 9
85-412 Cognitive Modeling 9
85-414 Cognitive Neuropsychology 9
85-419 Introduction to Parallel Distributed Processing 9
85-421 Language and Thought 9
85-423 Cognitive Development 9
85-426 Learning in Humans and Machines 9
85-429 Cognitive Brain Imaging 9

Philosophy
80-210 Logic and Proofs 9
80-211 Logic and Mathematical Inquiry 9
80-220 Philosophy of Science 9
80-254 Analytic Philosophy 9
80-255 Pragmatism 9
80-270 Philosophy of Mind 9
80-310 Formal Logic 9
80-311 Undecidability and Incompleteness 9
80-314 Logic and Artificial Intelligence 9

Linguistics
76-385 Introduction to Discourse Analysis 9
80-280 Linguistic Analysis 9

Decision Sciences
88-302 Behavioral Decision Making 9

Neurosciences
03-362 Cellular Neuroscience 9

03-363 Systems Neuroscience 9
42-202 Psychology 9
15-386 Neural Computation 9
15-883 Computational Models of Neural Systems 12

Science Requirement
The Cognitive Science program requires two additional science courses (in the same science) beyond the college's two-course Science General Education requirement.

These can be selected from any one of the following areas.
03-xxx Biology *
09-xxx Chemistry
33-xxx Physics

* Those interested in a cognitive neuroscience focus are recommended to take biology courses, including if possible, 03-362, or 03-363.

Additional Major in Cognitive Science
In order to complete a double major in Cognitive Science, a student must fulfill the major requirements as listed under the Cognitive Science major. These include the programming requirement (15-112), the Mathematics and Statistics prerequisites, Computational/Cognitive Modeling Core, The Cognitive Psychology Core, the Cognitive Science Concentration Requirement, and the Supplementary Science Requirement. Students will be assigned a department advisor to help plan their program of studies in Cognitive Science.

Unified Double Major in Psychology & Biological Sciences
This major is intended to reflect the interdisciplinary nature of current research in the fields of biology and psychology, as well as the national trend in some professions to seek individuals broadly trained in both the social and natural sciences.

Note: Students entering from the Dietrich College of Humanities and Social Sciences will earn a Bachelor of Science in Psychology and Biological Sciences. Students in the Mellon College of Science will earn a Bachelor of Science in Biological Sciences and Psychology. Students in the joint Science and Humanities Scholars (SHS) program can complete the SHS educational core and choose either departmental order for their diploma.

Depending on a student's home college (DC or MCS), General Education (GenEd) requirements will be different. GenEd requirements for DC (http:// coursescatalog.web.cmu.edu/dietrichcollegeofhumanitiesandsocialsciences/ampsgeneraleducationprogram160) and MCS (http://coursescatalog.web.cmu.edu/melloncollegeofscience) are found on their respective Catalog pages.

Degree Requirements:

<table>
<thead>
<tr>
<th>Biological Sciences</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-121 Modern Biology</td>
<td>9</td>
</tr>
<tr>
<td>or 03-151 Honors Modern Biology</td>
<td></td>
</tr>
<tr>
<td>03-220 Genetics</td>
<td>9</td>
</tr>
<tr>
<td>03-231/232 Biochemistry I</td>
<td>9</td>
</tr>
<tr>
<td>03-320 Cell Biology</td>
<td>9</td>
</tr>
<tr>
<td>03-343 Experimental Techniques in Molecular Biology</td>
<td>12</td>
</tr>
<tr>
<td>03-411 Topics in Research</td>
<td>1</td>
</tr>
<tr>
<td>03-412 Topics in Research</td>
<td>1</td>
</tr>
<tr>
<td>03-xxx General Biology Elective 1</td>
<td>9</td>
</tr>
<tr>
<td>03-xxx Advanced Biology Elective 1</td>
<td>18</td>
</tr>
<tr>
<td>Total Biology units</td>
<td>77</td>
</tr>
</tbody>
</table>

1 Please see description and requirements for electives under the B.S. in Biological Sciences section of this Catalog.

<table>
<thead>
<tr>
<th>Mathematics, Statistics, Physics and Computer Science</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-120 Differential and Integral Calculus</td>
<td>10</td>
</tr>
<tr>
<td>21-122 Integration and Approximation</td>
<td>10</td>
</tr>
<tr>
<td>or 21-124 Calculus II for Biologists and Chemists</td>
<td></td>
</tr>
<tr>
<td>36-247 Statistics for Lab Sciences</td>
<td>9</td>
</tr>
<tr>
<td>or 36-201 Statistical Reasoning and Practice</td>
<td></td>
</tr>
<tr>
<td>36-309 Experimental Design for Behavioral and Social Sciences</td>
<td>9</td>
</tr>
<tr>
<td>33-121 Physics I for Science Students 2</td>
<td>12</td>
</tr>
<tr>
<td>15-110 Principles of Computing</td>
<td>10-12</td>
</tr>
<tr>
<td>or 15-112 Fundamentals of Programming and Computer Science</td>
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</table>
### Department of Psychology

<table>
<thead>
<tr>
<th>Units</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td>63-65</td>
<td>Total Science units</td>
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</table>

2 MCS students must also complete 33-122 Physics II for Biological Sciences & Chemistry Students.

<table>
<thead>
<tr>
<th>Units</th>
<th>Chemistry courses</th>
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<tbody>
<tr>
<td>69-12</td>
<td>85-105 Introduction to Modern Chemistry I</td>
</tr>
<tr>
<td>69-12</td>
<td>85-106 Modern Chemistry II</td>
</tr>
<tr>
<td>69-12</td>
<td>85-217 Organic Chemistry I</td>
</tr>
<tr>
<td>69-12</td>
<td>85-219 Modern Organic Chemistry</td>
</tr>
<tr>
<td>69-12</td>
<td>85-218 Organic Chemistry II</td>
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<tr>
<td>69-12</td>
<td>85-220 Modern Organic Chemistry II</td>
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<table>
<thead>
<tr>
<th>Units</th>
<th>Psychology courses</th>
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<tbody>
<tr>
<td>63-62</td>
<td>85-102 Introduction to Psychology</td>
</tr>
<tr>
<td>63-62</td>
<td>85-219 Biological Foundations of Behavior</td>
</tr>
<tr>
<td>63-62</td>
<td>85-2xx Survey Psychology Courses</td>
</tr>
<tr>
<td>63-62</td>
<td>85-310 Research Methods in Cognitive Psychology</td>
</tr>
<tr>
<td>63-62</td>
<td>85-314 Cognitive Neuroscience Research Methods</td>
</tr>
<tr>
<td>63-62</td>
<td>85-3xx Advanced Psychology Electives</td>
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<table>
<thead>
<tr>
<th>Units</th>
<th>Additional Advanced Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>85-3xx Advanced Psychology Elective</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>Additional Laboratory or Research Methods</th>
</tr>
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<tbody>
<tr>
<td>9-12</td>
<td>85-344 Experimental Biochemistry</td>
</tr>
<tr>
<td>9-12</td>
<td>85-350 Research Methods in Social Psychology</td>
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<table>
<thead>
<tr>
<th>Units</th>
<th>Elective Units</th>
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<tr>
<td>33-36</td>
<td>Free Electives</td>
</tr>
<tr>
<td>36-48</td>
<td>MCS Nontechnical Breadth or DC General Education requirements</td>
</tr>
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<table>
<thead>
<tr>
<th>Units</th>
<th>Minimum number of units required for degree:</th>
</tr>
</thead>
<tbody>
<tr>
<td>360</td>
<td>Minors in Psychology and Cognitive Neuroscience</td>
</tr>
</tbody>
</table>

#### Minor in Psychology

**I. Introductory course**

- 85-102 Introduction to Psychology 

**II. Area Survey courses**

Complete two courses.

- 85-211 Cognitive Psychology

<table>
<thead>
<tr>
<th>Units</th>
<th>Human Information Processing and Artificial Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>85-219 Biological Foundations of Behavior</td>
</tr>
<tr>
<td>9</td>
<td>85-221 Principles of Child Development</td>
</tr>
<tr>
<td>9</td>
<td>85-241 Social Psychology</td>
</tr>
<tr>
<td>9</td>
<td>85-251 Personality</td>
</tr>
</tbody>
</table>

#### Cognitive Neuroscience Electives

- 03-133 Neurobiology of Disease
- 03-362 Cellular Neuroscience
- 03-364 Developmental Neuroscience
- 03-365 Neural Correlates of Learning and Memory

### Cognitive Neuroscience Curriculum

**Required Coursework**

- 03-121 Modern Biology
- 03-363 Systems Neuroscience
- 85-219 Biological Foundations of Behavior
- 85-211 Cognitive Psychology
- or 85-213 Human Information Processing and Artificial Intelligence

**Distribution Requirements**

Three courses, including at least 1 from each of the following categories

- Approaches to Cognitive Neuroscience
- Cognitive Neuroscience Electives
- Computational Models of Neural Systems
- Statistical Methods for Neuroscience and Psychology

#### Minor in Cognitive Neuroscience

The minor in Cognitive Neuroscience offered by the Department of Psychology is similar to the Neuroscience Minor offered by the Department of Biological Sciences.

The differences between the two forms of the minor are determined by one required content course or seminar in psychology or any psychology course higher than 85-350. Exceptions for the advanced course requirement are: 85-480, 85-482, 85-484, 85-506, 85-507, 85-508, 85-601, 85-602, 66-501, 66-502.
The Honors Program

The Honors Program provides recognition of outstanding performance by students in the Psychology department. Participation enables students to pursue their own research ideas through completion of an honors thesis. The honors thesis is completed during the senior year. By completing a thesis, the student earns 18 units of credit and qualifies for graduation with “College Honors.” To qualify for the Honors Program, the student must maintain a quality point average of at least 3.50 in the major and 3.25 overall. More information on the Honor program can be found here (http://www.cmu.edu/dietrich/undergraduate/programs/shp).

A year long departmental senior thesis course exists (66-501 and 66-502) for students interested in pursuing a sizable research project who do not qualify for the honors program. More information can be obtained by contacting Emilie O'Leary at emilie@andrew.cmu.edu.

Faculty

JOHN R. ANDERSON, Richard King Mellon University Professor of Psychology and Computer Science – Ph.D., Stanford University; Carnegie Mellon, 1978–.
MARLENE BEHRMANN, Professor of Psychology – Ph.D., University of Toronto; Carnegie Mellon, 1993–.
SHARON CARVER, Director of Children's School, Teaching Professor of Psychology – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1993–.
SHELDON COHEN, Robert E. Doherty University Professor of Psychology – Ph.D., New York University; Carnegie Mellon, 1982–.
CHANTE COX-BOYD, Associate Teaching Professor – Ph.D., University of North Carolina at Chapel Hill; Carnegie Mellon, 1999–.
DAVID CRESWELL, Associate Professor – Ph.D., University of California, Los Angeles; Carnegie Mellon, 2008–.
KASEY CRESWELL, Assistant Professor – Ph.D., University of Pittsburgh; Carnegie Mellon, 2012–.
BROOKE C. FEENEY, Professor of Psychology – Ph.D., State University of New York at Buffalo; Carnegie Mellon, 2001–.
ANNA FISHER, Associate Professor – Ph.D., The Ohio State University; Carnegie Mellon, 2006–.
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