PSYCHOLOGY

For college-level requirements in undergraduate curricula leading to the degrees of bachelor of arts and bachelor of science, see Liberal Arts and Sciences, Curriculum.

An undergraduate major in psychology provides a liberal arts and science education, which also can serve as preparation for graduate study in psychology, law, or the health professions. The undergraduate major in psychology enables graduates to understand and apply the scientific principles, facts, and basic methods of psychology to their personal and professional activities. Students with a bachelor’s degree (B.A./B.S.) in psychology may qualify for a variety of positions including those in social sciences, mental health, corrections, rehabilitation, developmental disability centers, and business (management, insurance, opinion polls). Professional work as a psychologist in academic, business, clinical, government, and school settings requires graduate degrees. Depending on professional goals, a minor in another discipline may be desirable.

Following the recommendations of the American Psychological Association, the undergraduate curriculum in psychology is designed to allow each student to:
1. Develop a detailed knowledge of psychology
2. Develop an understanding of scientific inquiry and demonstrate critical thinking
3. Understand the role of ethics and diversity in human behavior
4. Be able to communicate effectively in the discourse of psychology
5. Develop skills supporting employment or graduate/professional education

The major must include the following psychology courses each with a minimum grade of C- and an overall average of C or better:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYCH 101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 102</td>
<td>Laboratory in Introductory Psychology</td>
<td>1</td>
</tr>
<tr>
<td>PSYCH 111</td>
<td>Orientation to Psychology</td>
<td>0.5</td>
</tr>
<tr>
<td>PSYCH 301</td>
<td>Research Design and Methodology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 440</td>
<td>Psychological Measurement I</td>
<td>3</td>
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</table>

The major also must include at least one course from four of the following six areas:

Area A
- PSYCH 230 Developmental Psychology
- PSYCH 335 Abnormal Psychology of Children and Adolescents

Area B
- PSYCH 280 Social Psychology
- PSYCH 380 Social Cognition

Area C
- PSYCH 310 Brain and Behavior
- PSYCH 315 Drugs and Behavior

Area D
- PSYCH 312 Sensation and Perception
- PSYCH 313 Learning and Memory
- PSYCH 316 Cognitive Psychology

Area E
- PSYCH 318 Thinking and Decision Making

Area F

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>PSYCH 460</td>
<td>Abnormal Psychology</td>
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</table>

Three additional 3-credit courses in psychology

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSYCH 250</td>
<td>Psychology of the Workplace</td>
<td></td>
</tr>
<tr>
<td>PSYCH 350</td>
<td>Human Factors in Technology</td>
<td></td>
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</table>

Three additional 3-credit courses in psychology must be taken. Area courses may be used to meet this requirement, but variable credit courses (PSYCH 291, PSYCH 470, PSYCH 490, PSYCH 491, and PSYCH 492) may not.

In accordance with college requirements, a C or better average is required in the courses used to satisfy the major.

Departmental requirements for the B.A. and B.S. include the following supporting courses:

6 credits in Philosophy including

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>PHIL 201</td>
<td>Introduction to Philosophy (not 207)</td>
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Two of the following

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>BIOL 101</td>
<td>Introductory Biology (or higher)</td>
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<tr>
<td>BIOL 155</td>
<td>Human Biology (or 255 or 256)</td>
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</tr>
<tr>
<td>BIOL 313</td>
<td>Principles of Genetics</td>
<td></td>
</tr>
<tr>
<td>CHEM 160</td>
<td>Chemistry in Modern Society (or higher)</td>
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<tr>
<td>PHYS 101</td>
<td>Physics for the Nonscientist (or higher)</td>
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</tr>
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<td>STAT 101</td>
<td>Principles of Statistics (or higher) *</td>
<td>4</td>
</tr>
<tr>
<td>MATH 104</td>
<td>Introduction to Probability (or 150 or higher) **</td>
<td>3</td>
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</table>

* minimum grade of C-
** excluding MATH 105 Introduction to Mathematical Ideas

Students electing a B.S. degree also must complete PSYCH 302 Research Methods in Psychology with a minimum grade of C- and a minimum of 10 additional supporting credits in supporting courses from the list of courses in the LAS Gen Ed Natural Sciences and Mathematical Disciplines Area (or approved departmental list) as follows: three credits in mathematics, six credits in natural sciences, and one additional credit in a laboratory course.

Students electing a B.A. degree also must complete an ISU approved minor.

The department offers a minor in psychology. The minor requires completing 18 credits in psychology, including PSYCH 101 Introduction to Psychology and PSYCH 301 Research Design and Methodology, each with a minimum grade of C-. At least 9 of the 18 credits must be in 300 level courses (or above), but no more than three credits total may be from PSYCH 291 Introductory Research Experience, PSYCH 490 Independent Study, PSYCH 491 Research Practicum, and PSYCH 492 Fieldwork Practicum. In addition to an overall C average or better in courses used to satisfy the minor, a C- or better is required in each course. Contact the psychology advising office for more information.

Communication Proficiency requirement

The department requires a grade of:

C or better in:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENGL 150</td>
<td>Critical Thinking and Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 250</td>
<td>Written, Oral, Visual, and Electronic Composition</td>
<td>3</td>
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Psychology, B.A.

Freshman

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<th>Spring</th>
<th>Credits</th>
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<tr>
<td>ENGL 150</td>
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<td>PSYCH 111</td>
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<td>Social Science Choice</td>
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<td>PSYCH 101</td>
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<td>Required Natural Science</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 102</td>
<td>1</td>
<td>Arts &amp; Humanities Choice</td>
<td>3</td>
</tr>
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<td>Required Math</td>
<td>3</td>
<td>Electives</td>
<td>3</td>
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<tr>
<td>Social Science Choice</td>
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<tr>
<td>LIB 160</td>
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14.5 15

Sophomore

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<th>Fall</th>
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Junior

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<tr>
<td>PSYCH 301</td>
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<td>PSYCH 302 or one of ENGL 302, ENGL 309, ENGL 314</td>
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Senior

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<tr>
<td>PSYCH 440</td>
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Total Credits: 121.5-123.5

Students in all ISU majors must complete a three-credit course in U.S. diversity and a three-credit course in international perspectives. Check (http://www.registrar.iastate.edu/courses/div-ip-guide.html) for a list of approved courses. Discuss with your adviser how the two courses that you select can be applied to your graduation plan.

Psychology, B.S.

Freshman

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<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENGL 150</td>
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<td>PSYCH 111</td>
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<td>Social Sciences Choice</td>
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<td>PSYCH 102</td>
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<td>Arts &amp; Humanities Choice</td>
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<tr>
<td>Required Math</td>
<td>3</td>
<td>Electives</td>
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<td>Social Sciences Choice</td>
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<tr>
<td>LIB 160</td>
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Sophomore

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<tr>
<td>Laboratory</td>
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Junior

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<th>Spring</th>
<th>Credits</th>
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<td>Required Math</td>
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<td>Foreign Language/Elective</td>
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<td>Foreign Language/Elective</td>
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<td>Philosophy Choice</td>
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<td>Electives</td>
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Senior

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<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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<tr>
<td>PSYCH 440</td>
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<td>Psychology Choice</td>
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14 16

Total Credits: 121.5-124.5

Students in all ISU majors must complete a three-credit course in U.S. diversity and a three-credit course in international perspectives. Check (http://www.registrar.iastate.edu/courses/div-ip-guide.html) for a list of approved courses. Discuss with your adviser how the two courses that you select can be applied to your graduation plan.

LAS majors require a minimum of 120 credits, including a minimum of 45 credits at the 300/400 level. You must also complete the LAS foreign language requirement.

1 Meet English Proficiency Requirement: C- minimum.
2 Psych Requirement: C minimum
3 Psych Requirement: C- minimum

* Choose from list of selected courses available from an adviser.

LAS majors require a minimum of 120 credits, including a minimum of 45 credits at the 300/400 level. You must also complete the LAS foreign language requirement.

1 Meet English Proficiency Requirement: C- minimum.
Graduate Study

The department offers work for the degree of doctor of philosophy in psychology. A master of science may be earned as part of that degree.

The department offers a doctoral specialization in counseling psychology (APA accredited) and doctoral areas of concentration in cognitive psychology and social psychology.

A basic goal of graduate study in the Department of Psychology is to provide all students with a broad base of knowledge in psychological science, as well as exposure to the content and methodological skills necessary for effective performance in teaching, research and professional practice. Accordingly, graduates have an extensive knowledge of psychological principles and the conceptual and quantitative skills to conduct psychological research and to communicate the results to the scientific community, students in the classroom, and the general public. Graduates in counseling psychology are skilled in delivering services to diverse clientele in a variety of settings.

The department also participates in the interdepartmental programs in human computer interaction (http://www.vrac.iastate.edu/hci/), neuroscience (http://www.neuroscience.iastate.edu/) and in the interdepartmental minor in gerontology (http://www.gerontology.iastate.edu/programs/).

A formal class and a supervised practicum in the teaching of psychology is recommended for all doctoral students whose future plans may include teaching at the college level. A 12-month internship in a training site or agency approved by the faculty is required of all doctoral students in counseling psychology.

Courses primarily for undergraduates:

**PSYCH 101: Introduction to Psychology**
(3-0) Cr. 3. F.S.SS.
Fundamental psychological concepts derived from the application of the scientific method to the study of behavior and mental processes. Applications of psychology.

**PSYCH 102: Laboratory in Introductory Psychology**
(0-2) Cr. 1. F.S.
*Prereq: Credit or enrollment in PSYCH 101*
Laboratory to accompany 101.

**PSYCH 111: Orientation to Psychology**
Cr. 0.5. F.S.
Program requirements and degree/career options. Required of psychology majors. Offered on a satisfactory-fail basis only.

**PSYCH 112: Psychology Learning Community Seminar**
(1-0) Cr. 1. Repeatable, maximum of 2 credits. F.S.
*Prereq: Participation in Freshman Learning Community*
Topics include orientation to academic program requirements, career awareness, strategies for successful transition to college, connections with other disciplines, and applying psychology via service learning opportunities. Offered on a satisfactory-fail basis only.

**PSYCH 131: Academic Learning Skills**
(0-2) Cr. 1. F.S.
Efficient methods of time management, goal setting and motivation, and other learning strategies such as note-taking, reading, and test preparation. Offered on a satisfactory-fail basis only.

**PSYCH 132: Motivation and Academic Learning Skills**
(0-2) Cr. 1. Repeatable. F.S.
*Prereq: PSYCH 131*
Continued development of academic learning skills with an emphasis on motivation and application of learning strategies. Offered on a satisfactory-fail basis only.

**PSYCH 230: Developmental Psychology**
(3-0) Cr. 3. F.S.SS.
Life-span development of physical traits, cognition, intelligence, language, social and emotional behavior, personality, and adjustment.

**PSYCH 250: Psychology of the Workplace**
(3-0) Cr. 3.
Survey of theories and research methods of psychology applied to the workplace. Consideration of employee selection, training, performance evaluation, leadership, work groups, employee motivation, job attitudes and behaviors, organizational culture, organizational development, human factors, and job design from the scientist-practitioner approach.

**PSYCH 280: Social Psychology**
(3-0) Cr. 3. F.S.SS.
Individual human behavior in social contexts. Emphasis on social judgments and decisions, attitudes, perceptions of others, social influence, aggression, stereotypes, and helping.

**PSYCH 291: Introductory Research Experience**
Cr. 1-4. Repeatable, maximum of 4 credits. F.S.
*Prereq: PSYCH 101, sophomore classification, and permission of instructor.*
Beginning level supervised research experience in a faculty laboratory. Offered on a satisfactory-fail basis only.

**PSYCH 301: Research Design and Methodology**
(3-0) Cr. 3. F.S.SS.
Overview of the principal research techniques used in psychology with an emphasis on the statistical analysis of psychological data.

**PSYCH 302: Research Methods in Psychology**
(2-2) Cr. 3. F.S.
*Prereq: PSYCH 301, ENGL 250*
Discussion of and experience in designing research studies, collecting and analyzing data, and preparing research reports in psychology.

**PSYCH 310: Brain and Behavior**
(3-0) Cr. 3. F.S.
*Prereq: PSYCH 101*
Survey of basic concepts in the neurosciences with emphasis on brain mechanisms mediating sensory processes, arousal, motivation, learning, and abnormal behavior.

**PSYCH 312: Sensation and Perception**
(3-0) Cr. 3. F.S.
*Prereq: PSYCH 101*
Survey of the physiology and psychology of human sensory systems including vision, audition, smell, taste, the skin senses, and the vestibular senses.
PSYCH 313: Learning and Memory
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101
Survey of fundamental concepts and theories related to learning and memory derived from human and animal research.

PSYCH 314: Motivation
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101
Theory and research on motivation at biological, environmental, and psychological levels. Topics include emotion, eating, sex, music, addictions, incentives, goal performance, personality, coping, self-determination and purpose.

PSYCH 315: Drugs and Behavior
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101
Biologically based examination of the effects of drugs on behavior and social interactions, including recreational drugs and drugs used in the treatment of psychiatric and neurological disorders.

PSYCH 316: Cognitive Psychology
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101
Overview of human cognition, including sensation and perception, attention, memory, education, language, and judgment and decision making.

PSYCH 318: Thinking and Decision Making
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101; STAT 101 or MATH 104 or equivalent
Understanding human reasoning and decision making, including evaluating evidence, judging probabilities, emotional influences, and social dilemmas, with emphasis on the mechanisms that underlie decision making.

PSYCH 333: Educational Psychology
(Cross-listed with C I). (3-0) Cr. 3. F.S.
Prereq: PSYCH 230 or HD FS 102, application to the teacher education program or major in psychology
Classroom learning with emphasis on theories of learning and cognition, and instructional techniques. Major emphasis on measurement theory and the classroom assessment of learning outcomes.

PSYCH 335: Abnormal Psychology of Children and Adolescents
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101; PSYCH 230 or HDFS 102
Psychopathology of children and adolescents, including childhood depression and anxiety disorders. Consideration of multiple probable causes and corresponding therapies.

PSYCH 346: Psychology of Women
(Cross-listed with W S). (3-0) Cr. 3. S.
Prereq: 2 courses in psychology including PSYCH 101
Survey of theory and research related to major biological, interpersonal, and cultural issues affecting girls’ and women’s psychological development and behavior.
Meets U.S. Diversity Requirement

PSYCH 347: U.S. Latino/a Psychology
(Cross-listed with US LS). (3-0) Cr. 3. S.
Prereq: Two courses in Psychology including PSYCH 101
Historical, political, and social contexts of psychological and mental health constructs in terms of their validity and utility for use in Latino/a people in the U.S. Unique aspects of psychological functioning particular to Latino/a peoples in the U.S.
Meets U.S. Diversity Requirement

PSYCH 348: Psychology of Religion
(Cross-listed with RELIG). (3-0) Cr. 3.
Prereq: Nine credits in psychology
Survey of psychological theory and research investigating religious and spiritual attitudes, beliefs and practices.

PSYCH 350: Human Factors in Technology
(3-0) Cr. 3. F.
Prereq: PSYCH 101; junior classification
Understanding human behavior and cognition in the context of modern technologies. Focus on emergent interactive technologies, human computer interaction, user centered design, usability analysis, and usability testing.

PSYCH 360: Personality Psychology
(3-0) Cr. 3. F.S.S.
Prereq: PSYCH 101
Historical and contemporary theory and research on development and expression of personality with a focus on normal functioning.

PSYCH 380: Social Cognition
(3-0) Cr. 3.
Prereq: PSYCH 101 or PSYCH 280
How people understand themselves and others, including attribution, social categories and schemas, the self, social inference, stereotypes, and prejudice.

PSYCH 381: Social Psychology of Small Group Behavior
(Cross-listed with SOC). (3-0) Cr. 3. S.
Prereq: SOC 305 or PSYCH 280
A survey of small group theory and research from an interdisciplinary, social psychological perspective.

PSYCH 383: Psychology and Law
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101 or PSYCH 280
Survey of topics in the interface between psychology and the legal system including but not limited to Miranda warning, confessions, police interrogation, lie detection, juries, eyewitness identification, false memories, and the death penalty.

PSYCH 386: Media Psychology
Cr. 3. F.S.S.S.
Prereq: PSYCH 101 or PSYCH 230 or PSYCH 280
Theories and research on the psychological mechanisms (e.g., attitudes, perceptions, emotions, arousal) by which media influence children and adults. Topics include media violence, educational media, advertising, music, video games, media literacy, and ratings.

PSYCH 401: History of Psychology
(3-0) Cr. 3. F.S.
Prereq: 4 courses in psychology
Philosophy and science backgrounds of psychology. Development of theories and causes of events in academic and applied psychology.
PSYCH 410: Behavioral Neurology
(Dual-listed with PSYCH 510). (3-0) Cr. 3. F.
Prereq: PSYCH 101; PSYCH 310 or equivalent.
Examination of the neuroanatomical foundation of cognition, affect, and action from a neurological perspective. Focus on basic and applied research with neurological patients.

PSYCH 411: Evolutionary Psychology
(3-0) Cr. 3. S.
Prereq: Junior classification, three courses in psychology; one course in biology
Examination of the application of the principles of evolutionary biology to the understanding of human behavior. Evolutionary perspectives on brain development, cognition, language, mating behavior, sex differences, altruism, artistic behavior, and criminal behavior are explored. Arguments by those critical of the evolutionary approach to psychology are also examined.

PSYCH 413: Psychology of Language
(Cross-listed with LING). (3-0) Cr. 3.
Prereq: PSYCH 101
Introduction to psycholinguistics. Topics may include origin of language, speech perception, language comprehension, reading, bilingualism, brain bases of language, and computational modeling of language processes.

PSYCH 422: Counseling Theories and Techniques
(3-0) Cr. 3. F.
Prereq: 3 courses in psychology
Overview of the major counseling theories and techniques, with emphasis on the key concepts of each theory, the role of the counselor, therapeutic goals, and the main techniques derived from each theory.

PSYCH 422L: Laboratory in Counseling Theory and Techniques
(0-2) Cr. 1. F.
Prereq: Three classes in psychology and credit or enrollment in PSYCH 422.
Learn basic counseling skills such as active listening, reflecting feelings, empathy, confrontation, immediacy and self-disclosure. Supervised practice using basic counseling skills.

PSYCH 440: Psychological Measurement I
(2-2) Cr. 3. F.S.S.
Prereq: PSYCH 301 and 9 credits in psychology, STAT 101
Principles of psychological measurement, including concepts of reliability and validity; interpretation of scores; factors influencing performance; construction and use of measures of ability, achievement, and personality.

PSYCH 450: Industrial Psychology
(3-0) Cr. 3. F.S.
Prereq: 2 courses in psychology including PSYCH 101, STAT 101
Theory, content and methods of industrial psychology related to the effective operation of organizations. Application of psychology principles to topics including different approaches used to select employees, how to conduct performance appraisals, and how to train and keep employees safe. Work attitudes and behaviors of employees as well as relevant legal issues. Statistics including regression and correlation are used.

PSYCH 460: Abnormal Psychology
(3-0) Cr. 3. F.S.S.
Prereq: 3 courses in psychology including PSYCH 101
Description of major forms of psychopathology including anxiety, mood disorders, personality disorders, substance abuse, and schizophrenia. Causes and maintenance of abnormal behavior.

PSYCH 465: Behavior Analysis
(3-0) Cr. 3. F.S.
Prereq: PSYCH 101, PSYCH 310 or equivalent
Theory and techniques of behavior analysis. Application of behavior analysis principles to behavior problems in educational, business, and industrial settings.

PSYCH 470: Seminar in Psychology
(1-0) Cr. 1-3. Repeatable.
Prereq: 12 credits in psychology
Current topics in psychological research and practice in the following areas.

PSYCH 470A: Seminar in Psychology: Counseling
(1-0) Cr. 1-3. Repeatable.
Prereq: 12 credits in psychology

PSYCH 470B: Seminar in Psychology: Experimental
(1-0) Cr. 1-3. Repeatable.
Prereq: 12 credits in psychology

PSYCH 470C: Seminar in Psychology: Individual Differences
(1-0) Cr. 1-3. Repeatable.
Prereq: 12 credits in psychology

PSYCH 470D: Seminar in Psychology: Social
(1-0) Cr. 1-3. Repeatable.
Prereq: 12 credits in psychology

PSYCH 484: Psychology of Close Relationships
(3-0) Cr. 3.
Prereq: 9 credits in psychology including PSYCH 280
Theories and research concerning the functions, development, and deterioration of close relationships. Influence of psychological processes on friendship, romantic, marital, and family relationships. Topics include mate selection, interdependence, trust and commitment, power and dominance in relationships, sexuality, divorce, gender roles, and family interaction.

PSYCH 485: Health Psychology
(3-0) Cr. 3. F.
Prereq: Junior classification, 6 credits in psychology
Application of psychological theory and research methods to issues in physical health. Psychological factors in illness prevention, health maintenance, treatment of illness, recovery from injury and illness, and adjustment to chronic illness.

PSYCH 487: Human Aggression
(3-0) Cr. 3. S.
Prereq: PSYCH 230 or PSYCH 280; PSYCH 301; PSYCH 313, PSYCH 316, PSYCH 318, PSYCH 360, or PSYCH 380
Theory and research on development and occurrence of human aggression; implications for prevention and treatment.

PSYCH 488: Cultural Psychology
(3-0) Cr. 3.
Prereq: PSYCH 280 and PSYCH 301; junior classification
Examination of the ways that cultural beliefs, values, and affordances shape cognitive, developmental, social and other psychological phenomena, as well as the forces that shape and change culture. Meets International Perspectives Requirement.

PSYCH 490: Independent Study
Cr. 1-3. Repeatable, maximum of 9 credits. F.S.S.S.
Prereq: Junior classification, 6 credits in psychology, and permission of instructor
Supervised reading in an area of psychology. Writing requirement. No more than 9 credits of Psych 490 may be counted toward a degree in psychology.
PSYCH 491: Research Practicum
Cr. arr. Repeatable, maximum of 9 credits. F.S.SS.
Prereq: Junior classification, permission of instructor, and credit or enrollment in PSYCH 301
Supervised research in an area of psychology. Primarily for students intending to pursue graduate education. No more than 9 credits of Psych 491 may be counted toward a degree in psychology.

PSYCH 492: Fieldwork Practicum
Cr. arr. Repeatable, maximum of 9 credits. F.S.SS.
Prereq: Junior classification, 12 credits in psychology, and permission of instructor
Supervised fieldwork in one of the following applied psychology settings. Offered on a satisfactory-fail basis only. No more than 9 credits of Psych 492 may be counted toward a degree in psychology.

PSYCH 492A: Fieldwork Practicum: Human Services
Cr. arr. Repeatable, maximum of 9 credits. F.S.SS.
Prereq: Junior classification, 12 credits in psychology and permission of instructor
Offered on a satisfactory-fail basis only.

PSYCH 492B: Fieldwork Practicum: I/O Psychology
Cr. arr. Repeatable, maximum of 9 credits. F.S.SS.
Prereq: Junior classification, 12 credits in psychology including PSYCH 450 or PSYCH 250 and permission of instructor.
Offered on a satisfactory-fail basis only.

Courses primarily for graduate students, open to qualified undergraduates:

PSYCH 501: Foundations of Behavioral Research
(3-0) Cr. 3. F.S.
Prereq: STAT 401 or equivalent
Ethical issues, research design, sampling design, measurement issues, power and precision analysis, interpretation of statistical results in non-experimental, quasi-experimental, and experimental research, use of statistical packages.

PSYCH 508: Research Methods in Applied Psychology
(3-0) Cr. 3.
Prereq: PSYCH 440 and PSYCH 501 or STAT 401
Methods and issues in applied psychological research. Role of theory in research, fidelity of measurement, selection of subjects, sampling, ethical issues, experimenter bias, data collection methods, power analysis, and professional standards for writing research articles. Emphasis on research methodological issues, not statistical issues.

PSYCH 510: Behavioral Neurology
(Dual-listed with PSYCH 410). (3-0) Cr. 3. F.
Prereq: PSYCH 101; PSYCH 310 or equivalent.
Examination of the neuroanatomical foundation of cognition, affect, and action from a neurological perspective. Focus on basic and applied research with neurological patients.

PSYCH 516: Advanced Cognition
(3-0) Cr. 3. F.S.
Prereq: PSYCH 316
Theoretical models and empirical research in human cognition including perception, attention, memory, concepts/categorization, imagery, and judgment and decision making.

PSYCH 517: Psychopharmacology
(3-0) Cr. 3.
Prereq: PSYCH 310, PSYCH 315, or equivalent and permission of instructor
Fundamentals of drug-behavior interactions with emphasis on psychoactive drugs and their use in experimental, therapeutic, and social settings.

PSYCH 519: Cognitive Neuropsychology
(3-0) Cr. 3.
Prereq: PSYCH 310 and PSYCH 316 or PSYCH 313; graduate classification or permission of instructor
Psychological models and related neurological substrates underlying cognition in normal and brain-damaged individuals.

PSYCH 521: Cognitive Psychology of Human Computer Interaction
(Cross-listed with HCI). (3-0) Cr. 3.
Prereq: Graduate classification or instructor approval
Biological, behavioral, perceptual, cognitive and social issues relevant to human computer interactions.

PSYCH 522: Scientific Methods in Human Computer Interaction
(Cross-listed with HCI). (3-0) Cr. 3. Alt. S., offered odd-numbered years.
Prereq: PSYCH 521 and STAT 101 or equivalent
Basics of hypothesis testing, experimental design, analysis and interpretation of data, and the ethical principles of human research as they apply to research in human computer interaction.

PSYCH 533: Educational Psychology of Learning, Cognition, and Memory
(Cross-listed with C I). (3-0) Cr. 3. F.
Learning, cognition, and memory in educational/training settings.

PSYCH 538: Developmental Disabilities
(Cross-listed with HD FS). (3-0) Cr. 3. Alt. F., offered odd-numbered years.
Prereq: 9 credits in human development and family studies or psychology or permission of instructor
Theories, research, and current issues regarding the intersection of development and disabilities. Investigation of interventions with individuals and families. (on-line course offering via Distance Education).

PSYCH 542: Applied Psychological Measurement
(3-0) Cr. 3. F.
Prereq: PSYCH 440
Principles of psychological measurement, including concepts of reliability and validity; interpretation of scores; factors influencing performance; test construction and use of measures of intelligence, ability, achievement, vocational interest, and personality. Ethical and multicultural issues in measurement.

PSYCH 544: Practicum in Assessment
(2-1) Cr. 2. F.S.
Prereq: PSYCH 542 and admission into the PhD program in counseling psychology
Supervised practice in integration of clinical interviewing, behavioral observation, and administration, scoring, and interpreting individual tests of cognitive function.

PSYCH 550: Advanced Personality Psychology
(3-0) Cr. 3.
Prereq: 4 courses in psychology, including PSYCH 360
Advanced analysis of contemporary theory and research on personality measurement, development, heritability, and social expression.
PSYCH 561: Psychopathology and Behavior Deviations  
(3-0) Cr. 3.  
Prereq: PSYCH 460  
Examination of theoretical perspectives and current research pertinent to the major forms of adult dysfunction including: adjustment, anxiety, mood, somatoform, dissociative, sexual and gender identity, personality, schizophrenic, eating, and substance abuse disorders.

PSYCH 562: Personality Assessment  
(3-0) Cr. 3.  
Prereq: PSYCH 360, PSYCH 440, PSYCH 542, and PSYCH 501 or STAT 401 and admission to the PhD program in counseling psychology  
Principles, concepts, and methods of personality assessment. Though not a practicum course, exposure is given to a variety of objective, projective, and situational tests.

PSYCH 580: Advanced Social Psychology: Psychological Perspectives  
(3-0) Cr. 3.  
Prereq: 4 courses in psychology, including PSYCH 280  
Current theories, methods, and research in social psychology with an emphasis on cognitive and interpersonal processes such as attribution, social cognition, attitude change, attraction, aggression, and social comparison.

PSYCH 590: Special Topics  
Cr. arr. Repeatable.  
Prereq: 12 credits in psychology, and permission of instructor  
Guided reading on special topics or individual research projects in the following areas.

PSYCH 590A: Special Topics: Counseling  
Cr. arr. Repeatable.  
Prereq: 12 credits in psychology, and permission of instructor

PSYCH 590Q: Special Topics: Cognitive  
Cr. arr. Repeatable.  
Prereq: 12 credits in psychology, and permission of instructor

PSYCH 590R: Special Topics: Social  
Cr. arr. Repeatable.  
Prereq: 12 credits in psychology, and permission of instructor

PSYCH 590Z: Special Topics: General  
Cr. arr. Repeatable.  
Prereq: 12 credits in psychology, and permission of instructor

PSYCH 592: Seminar in Psychology  
(1-0) Cr. 1-3. Repeatable.  
Prereq: 12 hours in psychology or graduate classification.  
Seminar in the following areas.

PSYCH 592C: Seminar in Psychology: Developmental  
(1-0) Cr. 1-3. Repeatable. F.S.  
Prereq: 12 hours in psychology or graduate classification.

PSYCH 592P: Seminar in Psychology: Research Methods and Psychometrics  
(1-0) Cr. 1-3. Repeatable.  
Prereq: 12 hours in psychology or graduate classification.

PSYCH 592Z: Seminar in Psychology: General  
(1-0) Cr. 1-3. Repeatable.  
Prereq: 12 hours in psychology or graduate classification.

PSYCH 594: Quantitative Behavioral Methods  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent  
Specialized quantitative methods for social and behavioral research problems in the following areas.

PSYCH 594A: Quantitative Behavioral Methods: Classical psychometric theory  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594B: Quantitative Behavioral Methods: Modern psychometric methods  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594C: Quantitative Behavioral Methods: Construct validation  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594D: Quantitative Behavioral Methods: Multi-dimensional scaling  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594E: Quantitative Behavioral Methods: Meta-analysis  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594F: Quantitative Behavioral Methods: Longitudinal analysis  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594G: Quantitative Behavioral Methods: Power Analysis  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594I: Quantitative Behavioral Methods: Focus Groups  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent

PSYCH 594K: Quantitative Behavioral Methods: Mediation and Moderation  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent  
Specialized quantitative methods for social and behavioral research problems.

PSYCH 594L: Quantitative Behavioral Methods: Missing Data  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent  
Specialized quantitative methods for social and behavioral research problems.

PSYCH 594M: Quantitative Behavioral Methods: Power Analysis  
(1-0) Cr. 1. F.S.  
Prereq: PSYCH 501 or equivalent  
Specialized quantitative methods for social and behavioral research problems.

PSYCH 595: Seminar in Social Psychology  
Cr. 1-3. Repeatable. F.S.  
Prereq: 12 credits in Psychology  
Seminar in the following areas in social psychology.
PSYCH 595A: Seminar in Social Psychology: Social Cognition
Cr. 1-3. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 595B: Seminar in Social Psychology: Aggression
Cr. 1-3. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 595C: Seminar in Social Psychology: Culture
Cr. 1-3. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 595D: Seminar in Social Psychology: Attitudes and Attitude Change
Cr. 1-3. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 595E: Seminar in Social Psychology: Psychology and Law
Cr. 1-3. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 595F: Seminar in Social Psychology: Close Relationships
Cr. 1-3. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 595I: Seminar in Social Psychology: General
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 596: Seminar in Counseling Psychology
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology
Seminar in the following areas in counseling psychology.

PSYCH 596A: Seminar in Counseling Psychology: Supervision
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 596B: Seminar in Counseling Psychology: Research
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 596C: Seminar in Counseling Psychology: Multicultural
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 596D: Seminar in Counseling Psychology: Professional Issues and Ethics
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 596E: Seminar in Counseling Psychology: General
Cr. arr. Repeatable. F.S.
Prereq: 12 credits in Psychology

PSYCH 597: Internship in Psychology
Cr. R.
Prereq: M.S. degree candidacy; permission of instructor
Full-time, non-clinical, supervised experience in a setting relevant to psychology. Intended for master's degree level internships.

PSYCH 598: Seminar in Cognitive Psychology
Cr. 0. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401.
Seminar in the following areas in cognitive psychology.

PSYCH 598A: Seminar in Cognitive Psychology: Attention and Perception
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 598B: Seminar in Cognitive Psychology: Memory
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 598C: Seminar in Cognitive Psychology: Cognitive Neuroscience
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 598D: Seminar in Cognitive Psychology: Judgment and Decision Making
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 598E: Seminar in Cognitive Psychology: Evolution
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 598F: Seminar in Cognitive Psychology: Language
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 598G: Seminar in Cognitive Psychology: Applied
Cr. arr. Repeatable. F.S.
Prereq: PSYCH 516, PSYCH 501 or STAT 401

PSYCH 599: Creative Component
Cr. arr.
Offered on a satisfactory-fail basis only.

Courses for graduate students:

PSYCH 601: History of Philosophy of Psychology
(3-0) Cr. 3.
Prereq: 4 courses in psychology
Origins of psychology in philosophical, medical, and related thought.
Development as an independent discipline in the nineteenth and twentieth centuries as a science and as a practice including traditional and contemporary theory and philosophy.

PSYCH 605: Multi-level Modeling
(Cross-listed with HD FS). (3-0) Cr. 3. Alt. S., offered odd-numbered years.
Prereq: HD FS 503 and HD FS 505 or STAT 404 or permission of instructor
Rationale for and interpretation of random coefficient models. Strategies for the analysis of multi-level and panel data including models for random intercepts, random slopes, and growth curves.

PSYCH 621: Psychological Counseling -Theory and Process
(3-0) Cr. 3. F.
Prereq: 3 courses in psychology and permission of instructor
Overview of major counseling theories with emphases upon: key concepts of theories, the role of the counselor, and applications of theory in fostering client change.
PSYCH 621L: Psychological Counseling - Theory and Process: Techniques in Counseling
(0-6) Cr. 3. F.
Prereq: permission of instructor required
Development of basic counseling skills and techniques through observation, role-playing, case studies, and supervised counseling sessions.

PSYCH 623: Vocational Behavior
(3-0) Cr. 3.
Prereq: 3 courses in psychology or graduate classification
Theoretical views, research, and issues in career development through the life span. Methods of career counseling, including appraisal interviewing, assessment, test interpretation, and use of information sources.

PSYCH 626: Group Counseling
(2-2) Cr. 3.
Prereq: Graduate classification
Theory, research, ethical issues, and therapeutic considerations relevant to group counseling. Participation in lab exercises for development of group counseling skills and observation of ongoing groups.

PSYCH 633: Teaching of Psychology
(3-0) Cr. 3.
Prereq: Enrollment in doctoral degree program in psychology, completion of at least 1 year of graduate study, permission of instructor
Orientation to teaching of psychology at college level: academic issues and problems, instructional and evaluative techniques.

PSYCH 691: Practicum in Psychology
Cr. arr. F.S.
Prereq: Permission of instructor
Supervised practice and experience in the following fields of specialization in applied psychology.

PSYCH 691A: Practicum in Psychology: Counseling (Beginning)
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.
Prereq: PSYCH 621L

PSYCH 691B: Practicum in Psychology: Counseling (Intermediate)
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.
Prereq: Permission of instructor, PSYCH 691A

PSYCH 691C: Practicum in Psychology: Counseling (Advanced)
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.
Prereq: Permission of instructor, PSYCH 691A, PSYCH 691B

PSYCH 691D: Practicum in Psychology: Counseling (Advanced External Practicum)
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.
Prereq: Permission of instructor, PSYCH 691A, PSYCH 691B

PSYCH 691G: Practicum in Psychology: Group Counseling
Cr. 1-3. F.S.
Prereq: Permission of instructor, PSYCH 626, PSYCH 691A

PSYCH 691S: Practicum in Psychology: Supervision
Cr. 1-3. F.S.
Prereq: Permission of instructor, PSYCH 592A, PSYCH 621L

PSYCH 691T: Practicum in Psychology: Teaching
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.
Prereq: Permission of instructor, PSYCH 633
Offered on a satisfactory-fail basis only.

PSYCH 691Z: Practicum in Psychology: General
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.
Prereq: Permission of instructor

PSYCH 692: Research Seminar
(1-0) Cr. 1-3. Repeatable.
Prereq: Permission of instructor
Research seminar in the following areas.

PSYCH 692A: Research Seminar: Counseling
(1-0) Cr. 1-3. Repeatable.
Prereq: Permission of instructor

PSYCH 692Q: Research Seminar: Cognitive
(1-0) Cr. 1-3. Repeatable.
Prereq: Permission of instructor

PSYCH 692R: Research Seminar: Social
(1-0) Cr. 1-3. Repeatable.
Prereq: Permission of instructor

PSYCH 692Z: Research Seminar: General
(1-0) Cr. 1-3. Repeatable.
Prereq: Permission of instructor

PSYCH 697: Internship in Counseling Psychology
Cr. R.
Prereq: Ph.D. candidacy in the Counseling Psychology program, approved dissertation proposal, and permission of instructor
Full time supervised predoctoral internship experience in a setting relevant to counseling psychology.

PSYCH 699: Research
Cr. arr. Repeatable.
Offered on a satisfactory-fail basis only.