BS in Psychology

Degree Program Description

The study of Psychology aims to understand the mind, behavior, and mental health. The Bachelor of Science in Psychology (BS) degree is for students interested in a more science-oriented curriculum to better prepare them for further study in science-oriented psychology graduate programs (e.g., neuroscience, quantitative psychology), or medical school (e.g., Doctor of Medicine/MD, psychiatry), or other health-related graduate programs (e.g., pharmacy, physical therapy). The required science track is not noted on the BS diploma or transcripts, but students can indicate the science track on resumes and/or graduate school application forms. Regardless of a student’s ultimate goals, our faculty members believe that students will be best served by completing a rigorous research-oriented program of study. Therefore, students should expect their instructors to take a scientific approach to the particular psychological content of each course. While most psychology majors plan to find employment upon graduation with the undergraduate psychology degree, some psychology majors plan to pursue further study in psychology-related graduate or professional programs. Psychology majors work in diverse fields such as community and social services, human resources, management and business, health care, student affairs and services, law enforcement, education, and scientific research.

Major Program Requirements

To graduate with a Bachelor of Science in Psychology from the College of Arts and Science, a student must complete all degree, college and university graduation requirements (http://catalog.missouri.edu/academicdegreerequirements/universityrequirements), including university general education (http://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements) as well as all degree and college or school requirements. Students are reminded to check the Undergraduate Catalog for course descriptions and prerequisite information.

Major Core Requirements

- The psychology major requires 30 credit hours in psychology coursework.
- All courses that count toward the psychology major requirements must be completed with a grade of C or better. Grades of C- or below will not be accepted. This includes STAT 2500 and the required science track. The statistics requirement is fulfilled by taking either (a) STAT 1200 and STAT 2200 or (b) STAT 2500, or (c) STAT 1400 and STAT 2200.
- Students must complete MATH 1100 and STAT 1200. Students taking STAT 2500 must complete an additional pre-requisite math course of MATH 1300, MATH 1400 or MATH 1500.
- Students must complete STAT 1200 or STAT 2500 before or during the same semester as PSYCH 3010.
- Students must complete PSYCH 3010 before PSYCH 3020 which must be completed before the Psych Capstone Lab course. We do not make exceptions to the research methods sequence requirements.
- Students must complete at least two psychology courses numbered 4000 or above. The Psychology Capstone Lab will meet one of these 4000-level courses.

- Students must complete at least one psychology course numbered 3000 or above that is designated Writing Intensive (WI). The Psychology Capstone Lab will meet the WI requirement if completed during the fall or spring semesters. Capstones are not WI in the summer sessions.
- Students may use no more than 12 hours of Special Problems Courses, Special Readings Courses, or Internship Courses (PSYCH 2950, PSYCH 4940, PSYCH 4950, & PSYCH 4960) toward graduation. Within the 12 hours, no more than 9 hours may be Special Problems Courses (i.e., psychology research credit hours). A student may complete either 6 hours of PSYCH 2950 and 3 hours of PSYCH 4950, or they may complete 3 hours of PSYCH 2950 and 6 hours of PSYCH 4950.
- Psych majors may have up to a total of 6 hours of PSYCH 4940.
- Other than the 12 hour limit of Special Problems Courses, Special Readings Courses, and Internship hours described above, there is no limit to the number of psychology credits that may count toward the required 120 credits to graduate with the Bachelor of Science.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>PSYCH 1000</td>
<td>General Psychology</td>
<td>3</td>
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<tr>
<td>MATH 1100</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>STAT 2500</td>
<td>Introduction to Probability and Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td>STAT 1200 &amp; STAT 2200</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td>STAT 1400 &amp; STAT 2200</td>
<td>4</td>
</tr>
</tbody>
</table>

Research Methods Sequence

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>PSYCH 3010</td>
<td>Research Methods in Psychology I</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 3020</td>
<td>Research Methods in Psychology II</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 2950</td>
<td>Capstone course (psychology lab course)</td>
<td>3-6</td>
</tr>
</tbody>
</table>

Distribution Areas

Psychology majors are required to complete four distribution courses -- two courses in each of two distribution areas. This ensures that students will have exposure to a wide range of psychological theory and research. In addition, students choose two additional Psychology courses to receive further education according to their interests. Although the distribution areas are presented below as distinct areas of study, a great deal of overlap exists among them. Students should understand the ways in which the various areas complement one another and gain the ability to integrate information learned in the different areas.

Cognitive/Neuroscience Distribution

This distribution area studies the mechanisms of the mind and how they are altered by experience. It also examines the biological basis of the behavior of humans and animals. Courses in this distribution area include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 2110</td>
<td>Learning, Memory, and Cognition</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 2210</td>
<td>Mind, Brain, and Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 2220</td>
<td>Drugs and Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 2810</td>
<td>Human Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 3110</td>
<td>Theories of Learning</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 3140</td>
<td>Cognitive Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 3150</td>
<td>Human Memory</td>
<td>3</td>
</tr>
</tbody>
</table>
PSYCH 3160  Perception and Thought  3
PSYCH 3420  Cognitive Development in Childhood  3
PSYCH 3830  Health Psychology  3
PSYCH 3870  Sleep and Sleep Disorders  3
PSYCH 4110  Perception  3
PSYCH 4210  Physiological Psychology  3
PSYCH 4240  Cognitive Neuroscience  3
PSYCH 4440  Sex Differences  3
PSYCH 4520  Behavior Genetics  3
PSYCH 4570  Pediatric Neuropsychology  3

Note: A student may not receive credit for PSYCH 2210 if it is taken after PSYCH 4210.

Clinical/Social/Developmental Distribution

This distribution area studies the nature and causes of individuals’ thoughts, feelings and behavior in social situations. It analyzes the cultural and biological influences on age-related changes in cognition, emotion, and social behavior that take place throughout an individual’s lifespan. It focuses on scientific study of the causes of mental disorders as well as methods for assessing and alleviating mental health problems. It also is concerned with the study of mental health and wellness, including strategies for preventing the development of mental disorders. Courses in this distribution area include:

PSYCH 2310  Social Psychology  3
PSYCH 2320  Introduction to Personality  3
PSYCH 2410  Developmental Psychology  3
PSYCH 2410H Developmental Psychology - Honors  3
PSYCH 2510  Survey of Abnormal Psychology  3
PSYCH 2820  Minds, Brains, and Machines  3
PSYCH 2830  Human-Companion Animal Interaction  3
PSYCH 3310  Intergroup Relations  3
PSYCH 3350  Positive Psychology  3
PSYCH 3370  The Science of Mindfulness  3
PSYCH 3370W The Science of Mindfulness - Writing Intensive  3
PSYCH 3420  Cognitive Development in Childhood  3
PSYCH 3430  Social Development in Childhood  3
PSYCH 3430W Social Development in Childhood - Writing Intensive  3
PSYCH 3440  Women's Professional Development  3
PSYCH 3440H Women's Professional Development - Honors  3
PSYCH 3510  Introduction to Clinical Psychology  3
PSYCH 3510W Introduction to Clinical Psychology - Writing Intensive  3
PSYCH 3815  Cross-Cultural Psychology  3
PSYCH 3815H Cross-Cultural Psychology - Honors  3
PSYCH 3830  Health Psychology  3
PSYCH 3840  Individual Differences  3
PSYCH 4440  Sex Differences  3
PSYCH 4520  Behavior Genetics  3
PSYCH 4530  Research in Psychopathology  3
PSYCH 4540  Emotional Disorders in Childhood and Adolescence  3
PSYCH 4560  Schizophrenia  3
PSYCH 4561  Psychosis and the Brain  3

PSYCH 4570  Pediatric Neuropsychology  3
PSYCH 4580  Externalizing Spectrum Disorders  3

Note: Due to overlap in course content, a student may not receive credit for both PSYCH 3350 and ESC_PS 4200.

Psychology Electives (2000-level) 6 credit hours

Students must complete two psychology elective courses numbered 2000 or above, excluding Special Problems/Readings (i.e., PSYCH 2950, PSYCH 4950, PSYCH 4960), Internship PSYCH 4940, and Capstone Labs.

Foreign Language Alternative for students pursuing a Bachelor of Science in Psychology

Students who are pursuing the Bachelor of Science in Psychology may opt to satisfy the foreign language requirement through approved alternative coursework consisting of at least 12 credits in courses numbered 2000 or above from any combination of the following subjects: Arabic, Chinese, French, German, Hebrew, Italian, Japanese, Korean, Portuguese, Russian, South Asian Studies, and/or Spanish. These courses may not be used to satisfy other degree requirements with the exception of the Writing Intensive requirement. Students should note that the option of a Foreign Language Alternative is applicable specifically to the Bachelor of Science in Psychology. The foreign language requirement for the Bachelor of Arts in Psychology is 12 to 13 hours of a single foreign language sequence.

Approved Science Course Tracks

Psychology Bachelor of Science students must complete 12 credit hours of approved science coursework in one of the following five approved areas: Biological Sciences, Chemistry, Computer Science, Mathematics, or Statistics. Course grades must be a C or higher. No C- or lower will be accepted.

Biological Sciences Track

Required Core: (5 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO_SC 1500</td>
<td>Introduction to Biological Systems with Laboratory</td>
<td>5</td>
</tr>
<tr>
<td>OR</td>
<td>BIO_SC 1500H</td>
<td>Introduction to Biological Systems with Laboratory Honors</td>
</tr>
<tr>
<td>OR</td>
<td>BIO_SC 1010 &amp; BIO_SC 1020</td>
<td>General Principles and Concepts of Biology and General Biology Laboratory (with grades of A- or better)</td>
</tr>
</tbody>
</table>

Additional Approved Coursework (at least 7 credit hours from the list below)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO_SC 2200</td>
<td>General Genetics</td>
</tr>
<tr>
<td>BIO_SC 2200H</td>
<td>General Genetics - Honors</td>
</tr>
<tr>
<td>BIO_SC 2300</td>
<td>Introduction to Cell Biology</td>
</tr>
<tr>
<td>BIO_SC 2300H</td>
<td>Introduction to Cell Biology - Honors</td>
</tr>
</tbody>
</table>
Chemistry Track

Required Core: (6 to 8 hours)

Prior to Fall Semester 2013: CHEM 1310 (2 hours) and CHEM 1320 or CHEM 1320H (3 hours) and CHEM 1330 or CHEM 1330H (3 hours)

CHEM 1320 College Chemistry I and College Chemistry II 8
& CHEM 1330

OR

CHEM 1320H College Chemistry I - Honors and College Chemistry II - Honors 8
& CHEM 1330H

Beginning in Fall Semester 2013: CHEM 1320 or CHEM 1320H (4 hours) and CHEM 1330 or CHEM 1330H (4 hours)

CHEM 1320 College Chemistry I and College Chemistry II 8
& CHEM 1330

OR

CHEM 1320H College Chemistry I - Honors and College Chemistry II - Honors 8
& CHEM 1330H

Additional Approved Coursework (at least 4 to 6 credit hours from list below)

CHEM 2100 Organic Chemistry I 3
CHEM 2110 Organic Chemistry II 3
CHEM 2130 Organic Laboratory I 2
CHEM 2140 Organic Laboratory II 2
CHEM 2170H Honors Organic Chemistry II with Lab - Honors 5
CHEM 2400 Fundamentals of Inorganic Chemistry with Lab 3
CHEM 3200 Quantitative Methods of Analysis with Lab 4
CHEM 3300 Fundamentals of Physical Chemistry (OR CHEM 3310 Physical Chemistry) 3
CHEM 3330 Physical Chemistry II 3
CHEM 3330H Physical Chemistry II - Honors 3
CHEM 3340 Physical Chemistry Laboratory 3
CHEM 4170 Medicinal Chemistry 3
CHEM 4400 Inorganic Chemistry 3

Computer Science Track

Required Core: (8 hours):

CMP_SC 1050 Algorithm Design and Programming I 4
CMP_SC 2050 Algorithm Design and Programming II 4

Additional Approved Coursework (at least 6 credit hours from list below)

CMP_SC 2270 Introduction to Logic Systems (Prior to SP14 course was numbered 3270) 3
CMP_SC 2830 Web Application Development I 3

Mathematical Sciences Track

Required Courses: (The Math Track requires 13 credit hours):

MATH 1500 Analytic Geometry and Calculus I 5
OR
MATH 1500H Analytic Geometry and Calculus I - Honors 5
MATH 1700 Calculus II 5
OR
MATH 1700H Calculus II - Honors 5
MATH 2300 Calculus III 3
OR
MATH 2300H Calculus III - Honors 3

Additional Approved Coursework (at least 6 credit hours from list below)

STAT 2200 Introduction to Probability and Statistics I 3
STAT 4710 Introduction to Mathematical Statistics 3
STAT 3500 Applied Multivariate Data Analysis 3
STAT 4560 Applied Statistical Models I 3
STAT 4510 Applied Statistical Models II 3
STAT 4410 Applied Categorical Data Analysis 3
STAT 4310 Sampling Techniques 3
STAT 4410 Biostatistics and Clinical Trials 3
STAT 4510 Applied Statistical Models I 3
STAT 4560 Applied Multivariate Data Analysis 3
STAT 4830 Categorical Data Analysis 3

Note: Students completing this track must complete additional math courses to meet the pre-req's for STAT 4710. Students will complete MATH 1160 OR MATH 1100 and MATH 1140 and MATH 1500. MATH 1700 and MATH 2300 in sequence as prerequisites to STAT 4710.

Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available. Psychology majors are required to earn a C or higher (no C- or below) in all Psychology courses, STAT 2500 or STAT 1200 and STAT 2200 or STAT 1400 and STAT 2200 and all Science Track courses.

First Year

Fall | CR Spring | CR
---|---|---
PSYCH 1000 | 3 | MATH 1050 | 3
ENGLISH 1000 | 3 | MATH 1100 | 3
MATH 1100 | 3 | Psych Cognitive/Neuroscience Distribution Course | 3
Social Science Course | 3 | Behavioral Science | 3
Humanities Course | 3 | AGH: Social Science Course | 3
| | Humanities Course | 3
| | B.S. Science Track Course | 3-5

15 | 18-20
### Second Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>CR Spring</th>
<th>CR</th>
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<tbody>
<tr>
<td>Psych Clinical/Social/Developmental Distribution Course&lt;sup&gt;^&lt;/sup&gt;</td>
<td>3</td>
<td>Psych Cognitive/Neuroscience Distribution Course&lt;sup&gt;^&lt;/sup&gt;</td>
</tr>
<tr>
<td>Biological/Physical/Mathematics Science Course</td>
<td>B.S. Science Track Course (with LAB)&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3-5</td>
</tr>
<tr>
<td>Humanities (2000+ Arts &amp; Sci approved)&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>1000+ elective</td>
</tr>
<tr>
<td>Behavioral Science (2000+ A&amp;S approved)&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>PSYCH 3010&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>B.S. Science Track Course&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3-5</td>
<td>1000+ elective (Writing Intensive)&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>A&amp;S Diversity Requirement&lt;sup&gt;+&lt;/sup&gt;</td>
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### Third Year

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<tr>
<th>Fall</th>
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<tbody>
<tr>
<td>Psy 2000+ elective&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>PSYCH 3020&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>B.S. Science Track Course (if necessary)&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>Social Science (2000+)&lt;sup&gt;+&lt;/sup&gt;</td>
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<tr>
<td>3000+ elective</td>
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<td>3000+ elective</td>
</tr>
<tr>
<td>1000+ elective</td>
<td>3</td>
<td>Foreign Language + 1&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
<tr>
<td>Humanities Course&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>STAT 2200&lt;sup&gt;+&lt;/sup&gt;</td>
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<td></td>
<td></td>
<td>Biological/Physical/Mathematics Science Course</td>
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<td><strong>Total Credits:</strong></td>
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### Fourth Year

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<thead>
<tr>
<th>Fall</th>
<th>CR Spring</th>
<th>CR</th>
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<tbody>
<tr>
<td>Psy Capstone (Writing Intensive)&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>Psych 4000+ elective&lt;sup&gt;+&lt;/sup&gt;</td>
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<tr>
<td>Psych Clinical/Social/Developmental Distribution Course&lt;sup&gt;+&lt;/sup&gt;</td>
<td>3</td>
<td>Foreign Language + 3&lt;sup&gt;+&lt;/sup&gt;</td>
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<td>Foreign Language + 2&lt;sup&gt;+&lt;/sup&gt;</td>
<td>4</td>
<td>3000+ elective</td>
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<td><strong>Total Credits:</strong></td>
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**Total Credits: 123-129**

<sup>^</sup> Course meets degree program requirement.

<sup>+</sup> Course meets University General Education and/or campus graduation requirement.

<sup>+</sup> Course meets College of Arts & Science foundation (Basic Skills)