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.
- 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.
- A required statistics course (STAT 2500 or higher, or STAT 1200 and STAT 2200).
- Students must complete MATH 1100 before STAT 2500 and PSYCH 3010, before PSYCH 3020, before the capstone lab. We make no 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. 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>Hours</th>
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</thead>
<tbody>
<tr>
<td>PSYCH 1000</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>STAT 2500</td>
<td>Introduction to Probability and Statistics I</td>
<td>3</td>
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<tr>
<td>OR</td>
<td>STAT 1200</td>
<td>Introductory Statistical Reasoning &amp; STAT 2200</td>
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Research Methods Sequence

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</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>Capstone course (psychology lab course)</td>
<td>3-6</td>
<td></td>
</tr>
</tbody>
</table>

Distribution Areas

Psychology majors are required to take one course from four of the five 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.

Learning/Cognition

This distribution area studies the mechanisms of the mind and how they are altered by experience. Courses in this distribution area include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PSYCH 2110</td>
<td>Learning, Memory, and Cognition</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>
<tr>
<td>PSYCH 3160</td>
<td>Perception and Thought</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 4110</td>
<td>Perception</td>
<td>3</td>
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</tbody>
</table>

Biological/Neuroscience

This distribution area studies the biological basis of the behavior of humans and other animals. Courses in this distribution area include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<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 3830</td>
<td>Health Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 4210</td>
<td>Physiological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 4240</td>
<td>Cognitive Neuroscience</td>
<td>3</td>
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</tbody>
</table>

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

This distribution area employs scientific methods to understand the nature and causes of individual’s thoughts, feelings and behavior in social situations. Courses in this distribution area include:

- PSYCH 2310 Social Psychology 3
- PSYCH 2320 Introduction to Personality 3
- PSYCH 2330 Consumer Psychology 3
- PSYCH 3350 Positive Psychology 3
- PSYCH 3360 Automatic Social Judgments 3
- PSYCH 3370 The Science of Mindfulness (Psych 3010 prerequisite) 3
- PSYCH 4360 Social Cognition 3
- PSYCH 4815 Cross-Cultural Psychology 3

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

Developmental

This distribution area studies the cultural and biological influences on age-related changes in cognition, emotion and social behavior that take place throughout an individual’s lifespan. Courses in this distribution area include:

- PSYCH 2410 Developmental Psychology 3
- PSYCH 3420 Cognitive Development in Childhood 3
- PSYCH 3430 Social Development in Childhood 3
- PSYCH 4440 Sex Differences 3

Note: Due to the overlap in course content, a student may receive credit for only one of the following three courses: PSYCH 2410, H_D_FS 3420 or ESC_PS 2500.

Clinical/Abnormal

This distribution area focuses on scientific study of the causes of mental disorders as well as methods for assessing and alleviating mental health problems and related types of maladjustment. It also is concerned with the study of mental health and wellness, including strategies for preventing the development of mental disorders. Courses in this area include:

- PSYCH 2510 Survey of Abnormal Psychology 3
- PSYCH 2830 Human-Companion Animal Interaction 3
- PSYCH 3510 Introduction to Clinical Psychology 3
- PSYCH 3840 Individual Differences 3
- PSYCH 4520 Behavior Genetics (Prerequisite of Psych 3010 and Stat 1200 with a C or better) 3
- PSYCH 4530 Research in Psychopathology 3
- PSYCH 4540 Emotional Disorders in Childhood and Adolescence 3
- PSYCH 4560 Schizophrenia 3
- PSYCH 4570 Pediatric Neuropsychology 3
- PSYCH 4580 Externalizing Spectrum Disorders 3

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.

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>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIO_SC 1500</td>
<td>Introduction to Biological Systems with Laboratory</td>
</tr>
<tr>
<td>OR</td>
<td>BIO_SC 1500H</td>
</tr>
<tr>
<td>OR</td>
<td>BIO_SC 1010 &amp; BIO_SC 1020</td>
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**Additional Approved Coursework (at least 7 credit hours from the list below)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIO_SC 2200</td>
<td>General Genetics</td>
</tr>
<tr>
<td>BIO_SC 2300</td>
<td>Introduction to Cell Biology</td>
</tr>
<tr>
<td>BIO_SC 3400</td>
<td>Evolution and Ecology</td>
</tr>
<tr>
<td>BIO_SC 3700</td>
<td>Animal Physiology</td>
</tr>
<tr>
<td>BIO_SC 4500</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIO_SC 4600</td>
<td>Evolution</td>
</tr>
<tr>
<td>BIO_SC 4640</td>
<td>Behavioral Biology</td>
</tr>
<tr>
<td>BIO_SC 4986</td>
<td>Neurology of Motor Systems</td>
</tr>
<tr>
<td>BIO_SC 4988</td>
<td>Nerve Cells and Behavior</td>
</tr>
<tr>
<td>MPP 3202</td>
<td>Elements of Physiology</td>
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</tbody>
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Chemistry Track

**Required Core:** (6 to 8 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEM 1310 &amp; CHEM 1320</td>
<td>College Chemistry I and College Chemistry II</td>
</tr>
<tr>
<td>OR</td>
<td>CHEM 1320H &amp; CHEM 1330H</td>
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**Beginning in Fall Semester 2013:** CHEM 1320 or CHEM 1320H (4 hours) and CHEM 1330 or CHEM 1330H (4 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEM 1320 &amp; CHEM 1330</td>
<td>College Chemistry I and College Chemistry II</td>
</tr>
<tr>
<td>OR</td>
<td>CHEM 1320H &amp; CHEM 1330H</td>
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</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEM 2100</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHEM 2110</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>CHEM 2130</td>
<td>Organic Laboratory I</td>
</tr>
<tr>
<td>CHEM 2140</td>
<td>Organic Laboratory II</td>
</tr>
<tr>
<td>CHEM 2160H</td>
<td>Honors Organic Chemistry I - Honors</td>
</tr>
</tbody>
</table>
CHEM 2170H  Honors Organic Chemistry II with Lab - 5
CHEM 2190H  Honors Organic Chemistry Laboratory - 2
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 3340  Physical Chemistry Laboratory 3
CHEM 4170  Medicinal Chemistry 3
CHEM 4400  Inorganic Chemistry 3

Computer Science Track

Required Core: (6 to 9 hours):
INFO TC 1040  Introduction to Problem Solving and Programming 3

Note: Students with college credit hours for MATH 1100 (not an exemption) may begin in CMP_SC 1050 and complete at least 6 hours of additional approved coursework below.

Additional Approved Coursework (at least 3 to 6 credit hours from list below):
CMP_SC 1050  Algorithm Design and Programming I 3
CMP_SC 2050  Algorithm Design and Programming II 3

Mathematical Sciences Track

Required Courses: (The Math Track requires 13 credit hours):
MATH 1500  Analytic Geometry and Calculus I 5
MATH 1700  Calculus II 5
MATH 2300  Calculus III 3

Statistics Track

Required Core: (6 hours)
STAT 3500  Introduction to Probability and Statistics II 3
STAT 4710  Introduction to Mathematical Statistics 3

Additional Approved Coursework (at least 6 credit hours from list below):
STAT 4110  Statistical Software and Data Analysis 3
STAT 4150  Applied Categorical Data Analysis 3
STAT 4210  Applied Nonparametric Methods 3
STAT 4310  Sampling Techniques 3
STAT 4410  Biostatistics and Clinical Trials 3
STAT 4420  Applied Survival Analysis 3
STAT 4430  Applied Longitudinal Data Analysis 3
STAT 4510  Applied Statistical Models I 3
STAT 4560  Applied Multivariate Data Analysis 3
STAT 4810  Nonparametric Methods 3
STAT 4830  Categorical Data Analysis 3

STAT 4830  STAT 4810  STAT 4560  STAT 4510  STAT 4430  STAT 4420  STAT 4410  STAT 4310  STAT 4210  STAT 4110  STAT 4100  Inorganic Chemistry 3

Computer Science Track

Required Core: (6 to 9 hours):
INFO TC 1040  Introduction to Problem Solving and Programming 3

Note: Students with college credit hours for MATH 1100 (not an exemption) may begin in CMP_SC 1050 and complete at least 6 hours of additional approved coursework below.

Additional Approved Coursework (at least 3 to 6 credit hours from list below):
CMP_SC 1050  Algorithm Design and Programming I 3
CMP_SC 2050  Algorithm Design and Programming II 3

Mathematical Sciences Track

Required Courses: (The Math Track requires 13 credit hours):
MATH 1500  Analytic Geometry and Calculus I 5
MATH 1700  Calculus II 5
MATH 2300  Calculus III 3

Statistics Track

Required Core: (6 hours)
STAT 3500  Introduction to Probability and Statistics II 3
STAT 4710  Introduction to Mathematical Statistics 3

Additional Approved Coursework (at least 6 credit hours from list below):
STAT 4110  Statistical Software and Data Analysis 3
STAT 4150  Applied Categorical Data Analysis 3
STAT 4210  Applied Nonparametric Methods 3
STAT 4310  Sampling Techniques 3
STAT 4410  Biostatistics and Clinical Trials 3
STAT 4420  Applied Survival Analysis 3
STAT 4430  Applied Longitudinal Data Analysis 3
STAT 4510  Applied Statistical Models I 3
STAT 4560  Applied Multivariate Data Analysis 3
STAT 4810  Nonparametric Methods 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 2200 or STAT 1200 and STAT 2200 and all Science Track courses.

First Year
Fall  CR Spring  CR
PSYCH 1000  3  Psy Social/Porsonality Course  3
ENGLISH 1000  3  Behavioral Science  3
MATH 1100  3  AGH: Social Science Course  3
Social Science Course  3  Humanities Course  3
Humanities Course  3  B.S. Science Track Course  3-5

Second Year
Fall  CR Spring  CR
Psy Biological/Neuroscience Course  3  Psy Clinical/Abnormal Course  3
Humanities (2000+ Arts & Sci approved)  3-5
Behavioral Science (2000+ A&S approved)  3
B.S. Science Track Course  3-5
1000+ elective  3  1000+elective (Writing Intensive)  3

Third Year
Fall  CR Spring  CR
PSYCH 3010  3  PSYCH 3020  3
Psy 2000+ elective  3  Social Science (2000+)  3
B.S. Science Track Course (if necessary)  3
3000+ elective  3  Foreign Lanuage + 1  4
1000+ elective  3  STAT 2200  1
1000+ elective  3  1000+  1

Fourth Year
Fall  CR Spring  CR
Psy Capstone (Writing Intensive)  3  Psy 4000+ elective  3
Psy Learn/Cog or Developmental Course  3  Foreign Language + 3  4
Foreign Language + 2  4  3000+ elective  3
3000+ elective  3  3000+ elective  3
1000+ elective  1  3000+ elective  3

Total Credits: 120-126

* Course meets degree program requirement.
* Course meets University General Education and/or campus graduation requirement.
Course meets College of Arts & Science foundation (Basic Skills)