

***Concentrations in Psychology***  
***(for Majors in Psychological & Brain Sciences)***

(Revised August 2017)

For students who matriculated PRIOR to Summer 2016, please see p. 8 for requirement information regarding *Supplemental Concentrations*.

To augment the major in Psychological & Brain Sciences, the department offers the option of a Concentration for students who wish to engage more intensively with a specific area within the discipline.

A Concentration may be a valuable experience for students planning on graduate study in psychology or related fields, or for those who have a particular interest or want to gain expertise in one of the approved Concentrations. It may provide a useful preparation for Honors, or a substitute for the Honors experience for those students who may not qualify for Honors.

Completion of a Concentration entails 12 units:

- (i) three courses (for a total of 9 units), at least one of which must be an advanced, 400-level class; and
  - (ii) a semester of research in an appropriate, approved lab, consisting of Psych 444C: *Independent Study for a Concentration*, which requires successful completion of a research paper, or approved Honors. In some cases a relevant internship or practicum would be an appropriate alternative to research experience.
- (NOTE: Students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research, depending on the nature of the project intended for Psych 444C; the additional independent research is at the discretion of the research mentor, and will not be counted toward completion of the concentration requirements.)

Courses taken for a Concentration may be used to fulfill no more than one of the Core categories or distribution requirements of a Psychological & Brain Sciences major. None of the units for a Concentration can be counted for any other major or minor (i.e., there is no double counting). For those doing the Psychological & Brain Sciences: Cognitive Neuroscience major, the Cognitive Neuroscience Concentration is not an option.

Each Concentration has an advisor/coordinator (a member of the Psychological & Brain Sciences faculty) who will meet with interested students to help ensure successful and appropriate completion of the Concentration, and who serves as the liaison with the Undergraduate Committee. A student may pursue only one Concentration.

Forms for arranging a Concentration are available from Shelley Kohlman in Psychology room 207B.

Recognition of the concentration will appear on the student's academic record under *Milestones*.

***The six concentrations currently offered are:*** Cognition in Children; Cognitive Neuroscience; Lifespan Development; Reading, Language, & Language Acquisition; Experimental Psychopathology; and Personality & Individual Differences.

*Concentration:*  
**Cognition in Children**

The concentration **Cognition in Children** allows students to acquire deeper knowledge of cognitive processes in infancy and early childhood. The courses for the concentration consider child development more generally and then explore in more depth the development of cognitive, conceptual, linguistic, and social abilities. Students have the opportunity to work in a laboratory that is conducting current research on these topics, allowing them to gain hands-on experience in the research process by collecting and analyzing data from children. Alternatively, students have the option to work at the Washington University Family Learning Center (located on the North campus) or possibly another early childhood center in the greater St Louis region, which will provide hands-on experience interacting with preschool age children in a play environment.

This concentration should prove useful for students who are considering careers in a wide variety of fields – such as medicine (e.g., pediatrics, neonatology, child psychiatry, etc.), education, law, public health and social welfare – that might involve interaction with children and families. It is also excellent preparation for students who are considering graduate study in developmental psychology, cognitive science, education, neuroscience, or related academic fields.

Advisor/Coordinator: Professor Lori Markson

Coursework

Required:

Developmental Psychology – Psych 321

Electives – must include **2 classes**, at least one of which must be at the 400 level:

(Other directly relevant courses may be added or approved by the coordinator.)

The Developing Mind – Psych 218/219 (Sophomore Seminar)

Language Acquisition – Psych 358

Developmental Neuropsychology – Psych 4046

Development of Social Cognition – Psych 4591/4592

Research Mentorship:

Prior approved **research mentorship** with a relevant faculty member. Students will be enrolled in Psych 444A/C (Independent Study for a Supplemental Concentration/Independent Study for a Concentration) which will include one semester of research plus the successful completion of a substantive **research paper**, or Honors. (NOTE: At the research mentor's discretion, students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research.)

Potential mentors include: Dr. Pascal Boyer, Dr. Lori Markson, Dr. Rebecca Treiman, and Dr. Desiree White (P&BS)

By special approval: Dr. John Constantino, Dr. Joan Luby, Dr. Natasha Marrus, and Dr. John Pruett (Psychiatry)

*Concentration*  
**Cognitive Neuroscience**

The concentration, **Cognitive Neuroscience**, allows students to acquire deeper knowledge of the relation between mind and brain. The courses for the concentration consider the neurobiological basis for psychological functions at a more general level, and then explore in greater depth specialized topics relating to how higher cognitive processes, such as memory, attention, perception, and emotion, emerge from brain function. In addition, students will have the opportunity to work in a laboratory that is conducting current research on these topics, allowing them to gain hands-on experience collecting and analyzing cognitive neuroscience data.

This concentration should prove useful for students who are considering careers in a wide variety of fields – medicine (e.g., psychiatry, neurology, etc.), biotechnology (pharmaceuticals, imaging), and education. It also would provide excellent preparation for students who are considering graduate study in cognitive science, neuroscience, bioengineering, or related academic fields. The concentration also would be of interest to students who have a general interest in the brain and its relation to psychological phenomena.

Advisor/Coordinator: Professor Todd Braver

Coursework

Required:

Biological Psychology – Psy 3401 **or** Principles of the Nervous System – Psy 344

Electives – must include 2 classes, at least one of which is at the 400 level:

(Other courses may be added or approved by the coordinator.)

Drugs, Brain, and Behavior – Psych 374

Cognitive Neuroscience – Psych 3604

Advanced Cognitive Neuroscience WI – Psych 4413

Developmental Neuropsychology WI – Psych 4046

Inside the Disordered Brain – Psych 4765

Functional Neuroimaging Methods – Psych 4450

Genes, Brain, and Behavior – Psych 4745

Cognitive Neuroscience of Film – Psych 488

Research Mentorship:

Prior approved **research mentorship** with a relevant faculty member. Students will be enrolled in Psych 444A/C (Independent Study for a Supplemental Concentration/ Independent Study for a Concentration) which involves one semester of research plus the successful completion of a **research paper**, or Honors. (NOTE: At the research mentor's discretion, students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research.)

Potential mentors include: Dr. Deanna Barch, Dr. Ryan Bogdan, Dr. Todd Braver, Dr. Ian Dobbins, Dr. Denise Head, Dr. Kathleen McDermott, Dr. Desiree White, and Dr. Jeff Zacks (It may be possible to complete the research mentorship with a faculty member not in this list, but prior approval from the advisor/coordinator is required.)

*Concentration*  
**Lifespan Development**

Many introductory courses in Developmental Psychology focus on changes that occur from birth to adolescence. The concentration, **Lifespan Development**, provides students with an understanding of the cognitive and physiological changes that occur over the lifespan, with a primary focus on older adulthood. A major goal of the concentration is to provide students with an understanding of the similarities and differences in development at different stages of the lifespan. In addition, through coursework and either laboratory experience or an internship, students will gain an increased understanding of how developmental changes affect an individual's day-to-day functioning.

This concentration is suited for students interested in future work with older adults, as well as for those with an interest in children but who desire a broader, lifespan perspective. It also provides preparation for those with plans to attend graduate school in medicine, psychology, social work, or education, and who may have an interest in gerontology.

Advisor/Coordinator: Professor Mitchell Sommers

Coursework

Required:

Psychology of Aging – Psych 326 **and**  
Social Gerontology – Psych 427

Electives – must select at least *one* of the following courses:

(Other courses may be added or approved by the coordinator.)

Developmental Psychology – Psych 321  
Contemporary Topics in Developmental Psychology – Psych 4301

Research Mentorship or Internship experience:

Prior approved **research mentorship** with a relevant faculty member, or **internship**. In either case, students will be enrolled in Psych 444A/C (Independent Study for a Supplemental Concentration/ Independent Study for a Concentration) which involves one semester of research/internship plus the successful completion of a **research paper**, or Honors. (NOTE: At the research mentor's discretion, students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research.)

*Research option:*

Prior approved laboratory research mentorship related to older adults, and successful completion of a research paper.

Potential research mentors: Dr. Mitchell Sommers, Dr. David Balota, Dr. Sandra Hale, Dr. Denise Head, Dr. Brian Carpenter, and Dr. Lori Markson

*Internship option:*

Prior approved internship related to older adults, and successful completion of a paper. Possible internships: Work in an assisted-living facility or other community-based program designed to assist older adults. Other internships are available - see Dr. Brian Carpenter for opportunities.

*Concentration*  
**Reading, Language, and Language Acquisition**

The concentration in Reading, Language, and Language Acquisition provides students with a deep and broad knowledge of linguistic development. The courses look in depth at the development of written and spoken language. Students also will have the opportunity to work in one of the laboratories that is conducting research on these topics, allowing them to gain first-hand experience in collecting and analyzing linguistic data from children and/or adults and older adults.

This concentration is well-suited for students who are thinking about careers in such fields as teaching or speech-language pathology. It provides preparation for students who are considering graduate school in developmental psychology, educational psychology, or related fields, and for students with an interest in linguistics.

Advisor/Coordinator: Professor Rebecca Treiman

Coursework:

Required:

Intro to Linguistics - Ling 170D

Electives - must include 2 classes, at least one of which is at the 400-level. These may be chosen from the courses listed below, or from other courses approved by the coordinator.

Introduction to Speech and Hearing Sciences and Disorders - Psy 234

Language Acquisition - Psy 358 or Psych 358 W (Writing Intensive Version)

Psychology of Language - Psy 433

Reading and Reading Development - Psy 4351 or Psy 4352 (Writing Intensive Version)

Research Mentorship:

Prior approved **research mentorship** with a relevant faculty member. Students will be enrolled in Psych 444A/C (Independent Study for a Supplemental Concentration, Independent Study for a Concentration) which will include successful completion of a **research paper**, or Honors. (NOTE: At the research mentor's discretion, students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research.)

Relevant faculty research supervisors: Dr. Rebecca Treiman, Dr. David Balota, Dr. Lori Markson, and Dr. Mitchell Sommers

*Concentration*  
**Experimental Psychopathology**

The concentration in *Experimental Psychopathology* allows students to acquire more advanced knowledge of the ways in which psychologists study mental disorders. Current research has demonstrated the importance of integrating psychological and biological variables in understanding the classification, etiology, and treatment of a wide variety of mental disorders, including schizophrenia, mood disorders, anxiety disorders, substance use disorders, and eating disorders. Students who pursue this concentration will develop a broadly based appreciation for conceptual and methodological issues that are central to research in psychopathology.

This concentration should be useful for students who are interested in careers in clinical psychology, psychiatry, social work, or related fields concerned with mental health services. It will be especially beneficial for those who plan to apply to research-oriented training programs.

Advisor/Coordinator: Professor Deanna Barch

Coursework:

Required:

Abnormal Psychology, Psy 354

Electives – must include two classes, at least one of which is at the 400 level: (Other courses may be added or approved by the coordinator.)

Genes, Environment, and Human Behavior, Psy 345

Drugs, Brain, and Behavior, Psy 374

Personality and Psychopathology, Psy 4541

Inside the Disordered Brain: Biological Bases of the Major Mental Disorders,  
Psy 4765

Biopsychosocial Aspects of Eating Disorders and Obesity, Psy 4557

Genes, Brain and Behavior: Pathways to Psychopathology, Psy 4745

Research Mentorship:

Prior approved **research mentorship** with a relevant faculty member. Students will be enrolled in Psych 444A/C (Independent Study for a Supplemental Concentration/Independent Study for a Concentration) which will include successful completion of a **research paper**, or Honors. (NOTE: At the research mentor's discretion, students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research.)

Potential mentors include: Dr. Deanna Barch, Dr. Tom Oltmanns, Dr. Denise Wilfley, Dr. Josh Jackson, Dr. Tom Rodebaugh, Dr. Ryan Bogdan, and Dr. Renee Thompson

*Concentration*  
**Personality and Individual Differences**

The concentration, **Personality and Individual Differences**, allows students to acquire deeper knowledge of how and why individuals differ from one another, and the ways in which individual (e.g., personality, self) and group (e.g., gender) differences influence behavior, emotion, experience, identity, and psychopathology. The core course for the concentration (Psy 353) considers personality more generally. The seminars explore in depth specific aspects of personality and individual differences, including biological bases of individual differences (i.e., genetics), the interpersonal processes associated with personality and personality judgment, individual differences in self and identity, group differences, and personality pathology. Students have the opportunity to work in a laboratory that is conducting current research on these topics, allowing them to gain hands-on experience collecting and analyzing data on personality and individual differences.

Anyone interested in understanding individuals and the differences between them (including group differences, such as gender) would benefit from an in-depth study of personality and individual differences. This concentration should prove especially useful for students who are considering careers in personality psychology, human resources, clinical psychology, management, social psychology, psychiatry, social work, and law.

Advisor/Coordinator: Professor Tammy English

Coursework

Required:

Psychology of Personality – Psy 353

Electives – must include 2 classes, at least one of which is at the 400 level: (Other courses may be added or approved by the coordinator.)

Genes, Environment, and Human Behavior – Psy 345

Understanding Emotions – Psy 3645

Positive Psychology: The Science of Happiness – Psy 367

Contemporary Topics in Social Psych – Psy 413

Personality and Psychopathology – Psy 4541

Emotion Regulation – Psy 4555

Research Mentorship:

Prior approved **research mentorship** with a relevant faculty member. Students will be enrolled in Psych 444A/C (Independent Study for a Supplemental Concentration/ Independent Study for a Concentration) which will include successful completion of a **research paper**, or Honors. (NOTE: At the research mentor's discretion, students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research.)

Potential mentors include: Dr. Randy Larsen, Dr. Mike Strube, Dr. Tom Oltmanns, Dr. Josh Jackson, Dr. Renee Thompson, Dr. Tammy English, and Dr. Heike Winterheld

***Supplemental Concentrations in Psychology***  
***(for Majors in Psychological & Brain Sciences who Matriculated prior to Summer 2016)***

(revised August 2017)

For a Supplemental Concentration, a minimum of 12 units of coursework in one of the approved concentrations, in addition to the requirements of the major, are required.

Each Supplemental Concentration must contain no fewer than 4 classes from which a student may choose, and these classes must be offered on a regular basis (i.e., at least once a year, or in the case of advanced seminars, at least one possible seminar yearly). Other course offerings can be added, of course, when appropriate. Up to 2 specific classes in a concentration may be required, allowing for at least one choice option. One of the classes needed to complete the Supplemental Concentration must be an advanced, 400-level class. (A class from another department might be allowed to be included in the concentration, when deemed essential.)

None of the classes for a Supplemental Concentration may be used to fulfill any other aspect of the major (e.g., if the student completes, say, Cognitive, Psy 360, for the Supplemental Concentration, then that class would not fulfill the core BBC category), nor can any of the units for the Supplemental Concentration be used to count for any other major or minor. If 2 classes are in a core area of the Psychology major, however, then that core area will have been satisfied.

A semester of research in an appropriate, approved lab is required, consisting of Psych 444A: *Independent Study for a Supplemental Concentration*, and including successful completion of an APA-style research paper. In some cases a relevant internship or practicum would be an appropriate alternative to research experience. The internship or practicum would, however, be part of the 6 units of such credit that is permitted for the regular major, not part of the 9-10 additional units needed for the Supplemental Concentration. (NOTE: Students may be required to complete a preliminary semester [3units] of Psych 333, Independent Research, depending on the nature of the project intended for Psych 444A; the additional independent research is at the discretion of the research mentor, and will not be counted toward completion of the concentration requirements.)

Each Supplemental Concentration must have a contact person (a member of the psychology faculty) who meets with interested students and ensures successful and appropriate completion of the Supplemental Concentration, and serves as the liaison with the Undergraduate Committee. A student may pursue only one Supplemental Concentration.

Forms for arranging a Supplemental Concentration are available from Shelley Kohlman in Psychology room 207B.

Recognition of the Supplemental Concentration will appear on the student's academic record under *Milestones*.