## Psychology

This section presents the requirements for programs in:

- M.A. Psychology
- M.A. Psychology with Concentration in Mental Health and Well-Being
- M.A. Psychology with Specialization in Data Science
- Ph.D. Psychology
- Ph.D. Psychology with Concentration in Quantitative Methodology

### Program Requirements

#### M.A. Psychology (5.0 credits)

**Requirements:**

1. **1.0 credit in:**
   - PSYC 5410 [0.5] Advanced Analysis of Variance
   - PSYC 5411 [0.5] Advanced Regression
2. Completion of:
   - PSYC 5906 [0.0] Pro-Seminar in Psychology
3. **1.0 credit in** PSYC at the 5000 level, excluding the professional development courses listed in Item 4 and excluding the elective statistics courses listed below.
4. **0.5 credit from** the following professional development courses:
   - PSYC 5002 [0.5] Ethics in Psychology
   - PSYC 5003 [0.5] Open Science and Methodological Improvements
   - PSYC 5004 [0.5] Knowledge Translation
   - PSYC 5802 [0.5] Special Topics: Professional Development
   - PSYC 5903 [0.5] Practicum in Psychology
5. **2.5 credits in:**
   - PSYC 5909 [2.5] M.A. Thesis (which must be defended at an oral examination)

**Total Credits** 5.0

**Notes:**

1. Students must receive a minimum grade of A- in PSYC 5410, PSYC 5411, and PSYC 5209 or its approved replacement in order to complete the concentration.

#### M.A. Psychology with Concentration in Mental Health and Well-Being (5.0 credits)

**Requirements:**

1. **1.0 credit in:**
   - PSYC 5410 [0.5] Advanced Analysis of Variance
   - PSYC 5411 [0.5] Advanced Regression
2. **0.5 credit in:**
   - PSYC 5209 [0.5] Topics in Health Psychology
or other health-oriented course approved by the Graduate Supervisor
3. **0.5 credit from:**
   - PSYC 5107 [0.5] Psychology of Family Violence
   - PSYC 5208 [0.5] Advances in Positive Psychology
   - PSYC 5804 [0.5] Special Topics in Health Psychology
   - PSYC 5900 [0.5] Directed Studies
   - PSYC 5901 [0.5] Independent Research
4. **0.5 credit in:**
   - PSYC 5904 [0.5] Community Mental Health and Well-Being Practicum
5. Completion of:
   - PSYC 5906 [0.0] Pro-Seminar in Psychology
6. **2.5 credits in:**
   - PSYC 5909 [2.5] M.A. Thesis (which must be defended at an oral examination)

**Total Credits** 5.0

**Notes:**

1. Students must receive a minimum grade of A in each of the courses included in the Specialization.

#### M.A. Psychology with Specialization in Data Science (5.0 credits)

**Requirements:**

1. **1.0 credit in:**
   - PSYC 5410 [0.5] Advanced Analysis of Variance
   - PSYC 5411 [0.5] Advanced Regression
2. **0.5 credit in:**
   - DATA 5000 [0.5] Data Science Seminar
3. **0.5 credit in** PSYC at the 5000 level, excluding the professional development courses listed in Item 4 and excluding the elective statistics courses listed below.
4. **0.5 credit from** the following professional development courses:
   - PSYC 5002 [0.5] Ethics in Psychology
   - PSYC 5003 [0.5] Open Science and Methodological Improvements
   - PSYC 5004 [0.5] Knowledge Translation
   - PSYC 5802 [0.5] Special Topics: Professional Development
   - PSYC 5903 [0.5] Practicum in Psychology
5. Completion of:
   - PSYC 5906 [0.0] Pro-Seminar in Psychology
6. **2.5 credits in:**
   - PSYC 5909 [2.5] M.A. Thesis (in the area of Data Science, which must be defended at an oral examination)

**Total Credits** 5.0

**Notes:**

1. Students must receive a minimum grade of A in each of the courses included in the Specialization.
2. Courses for each research area are listed on the departmental website: carleton.ca/psychology.

#### Ph.D. Psychology (3.0 credits)

**Requirements:**

1. **1.0 credit in:**
   - PSYC 5410 [0.5] Advanced Analysis of Variance
   - PSYC 5411 [0.5] Advanced Regression
2. **0.5 credit in** Elective Statistics courses (listed below): or other, as approved by the graduate committee.
3. **1.0 credit in** graduate level PSYC courses, excluding the professional development courses listed in Item 4 and excluding the elective statistics courses listed below.
4. **0.5 credit from** the following professional development courses:
Ph.D. Psychology
with Concentration in Quantitative Methodology
(3.0 credits)

Requirements:
1. 1.0 credit in:
   - PSYC 5410 [0.5] Advanced Analysis of Variance
   - PSYC 5411 [0.5] Advanced Regression
2. 1.0 credit in Elective Statistics courses (listed below) or other as approved by the graduate committee
3. 0.5 credit in:
   - PSYC 6410 [0.5] Capstone Research Project in Quantitative Methods
4. 0.5 credit from the following professional development courses:
   - PSYC 5002 [0.5] Ethics in Psychology
   - PSYC 5003 [0.5] Open Science and Methodological Improvements
   - PSYC 5004 [0.5] Knowledge Translation
   - PSYC 5802 [0.5] Special Topics: Professional Development
   - PSYC 6104 [0.5] Seminar in University Teaching
   - PSYC 6114 [0.5] Teaching Practicum
   - PSYC 6903 [0.5] Practicum in Psychology
5. Completion of:
   - PSYC 6906 [0.0] Pro-Seminar in Psychology I
   - PSYC 6907 [0.0] Pro-Seminar in Psychology II
6. 0.0 credits in:
   - PSYC 6909 [0.0] Ph.D. Thesis

All Ph.D. candidates are required to submit a thesis prospectus. The prospectus examination will normally be successfully completed within seven calendar terms of the student's initial registration for full-time students and ten terms for part-time students.

Total Credits 3.0

Notes:
1. Students must receive a minimum grade of A in each of the courses included in the Concentration.
2. Registration in PSYC 6410 will occur after the other 2.0 credits have been completed and after a proposed research project has been approved by the Department.
3. Upon completion of the Concentration's requirements, the student will request an in-program change from a PhD in Psychology to a PhD in Psychology with a Concentration in Quantitative Methodology.
4. Courses for each research area are listed on the departmental website: carleton.ca/psychology.

Psychology Elective Statistics Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSYC 5401</td>
<td>Multivariate Techniques</td>
<td>[0.5]</td>
</tr>
<tr>
<td>PSYC 5407</td>
<td>Scale Development and Psychometrics</td>
<td>[0.5]</td>
</tr>
<tr>
<td>PSYC 5412</td>
<td>Topics in Advanced Statistics and Methods</td>
<td>[0.5]</td>
</tr>
<tr>
<td>PSYC 5413</td>
<td>Workshops in Advanced Statistics and Methods</td>
<td>[0.25]</td>
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<tr>
<td>PSYC 5414</td>
<td>Structural Equation Modeling</td>
<td>[0.5]</td>
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<tr>
<td>PSYC 5415</td>
<td>Multilevel Modeling</td>
<td>[0.5]</td>
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<tr>
<td>PSYC 5416</td>
<td>Advanced Survey Methods</td>
<td>[0.5]</td>
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<tr>
<td>PSYC 5417</td>
<td>Categorical Data Analysis</td>
<td>[0.5]</td>
</tr>
<tr>
<td>PSYC 5801</td>
<td>Special Topics: Statistics</td>
<td>[0.5]</td>
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</tbody>
</table>

Regulations
See the General Regulations section of this Calendar.

Admission Requirements
The normal requirement for admission into the master's programs is a B.A. Honours Psychology (or equivalent) with high honours standing, completion of a research thesis, and credit in a breadth of courses in line with the psychology major.

Qualifying Year
Occasionally, candidates with exceptional promise who offer less than Honours B.A. status may be admitted to a qualifying-year program approved by the graduate studies committee and designed to prepare them for master's study. A grade of B- or better must be obtained in each qualifying-year course, and candidates may be required to
complete satisfactorily the equivalent of a B.A.(Honours) thesis.

Admission
The requirements for admission to the Ph.D. program are outlined in the General Regulations section of this Calendar. Scores on the Graduate Record Examination are optional.

The Ph.D. program in psychology normally will be undertaken on a full-time basis; however, in cases of exceptional merit, the Department will accept a few candidates for the degree on a part-time basis.

Psychology (PSYC) Courses

PSYC 5001 [0.5 credit]
Qualitative Research Methods in Psychology
Introduction to various non-numerical, interpretive research methods. Attention will be devoted to the philosophical underpinnings of qualitative research, methods collecting and analyzing qualitative data, and issues regarding sampling, reliability, and validity. Includes: Experiential Learning Activity

PSYC 5002 [0.5 credit]
Ethics in Psychology
Ethical concepts and controversies related to research and practice in psychology. Topics may include ethical dilemmas and debates, professional codes of ethics, confidentiality, informed consent, legal rights and responsibilities, use of deception, or guidelines for research with special populations.

PSYC 5003 [0.5 credit]
Open Science and Methodological Improvements
Exploring recent debates around reproducibility and openness in psychology. Practical objectives involving the improvement of research practices, publication strategies, and evaluation of past findings. Topics may include basic issues in measurement, statistical inference, ethics, and philosophy of science.

PSYC 5004 [0.5 credit]
Knowledge Translation
Knowledge translation encompasses a wide variety of activities designed to support the flow of knowledge from creators (e.g., researchers) to users (e.g., policy makers) and back. This course explores theory and practice concerning the creation, synthesis, sharing, and uptake of knowledge, and communication skills.

PSYC 5011 [0.5 credit]
Topics in Social Psychology
A critical examination of scientific theory and research in social psychology. Topics may include social cognition, social influence, group processes, conflict resolution and social change.

PSYC 5012 [0.5 credit]
Topics in Organizational Psychology
A critical examination of scientific theory and research in organizational psychology. Topics may include personnel selection, work motivation, morale and productivity, organizational decision making, leadership and social action.

PSYC 5015 [0.5 credit]
Methods in Social and Personality Psychology
An overview of traditional and emerging research methods in social and personality psychology. Students will learn a variety of experimental and nonexperimental procedures for assessing individual differences, cognitions, emotions, attitudes, and behaviours in the laboratory and the field.

PSYC 5020 [0.5 credit]
Applications of Psychology to Policing and the Courts
A review of theory and research related to the application of psychology to various components of the criminal justice system, particularly policing and the courts. Topics may include criminal investigations, police use of force, eyewitness testimony and identification, victim rights, and jury decision making.

PSYC 5021 [0.5 credit]
Forensic Assessment
Theoretical and empirical issues of the biopsychosocial antecedents of criminal behaviour. Classification and assessment of offenders for courts, probation and parole services. Risk assessment, management and service planning are addressed in both correctional and mental health contexts.

PSYC 5022 [0.5 credit]
Adult Offenders
Theoretical and empirical issues on the use of different types of interventions in modifying adult criminal behaviour. Institutional treatment and community-based approaches are discussed.

PSYC 5024 [0.5 credit]
Juvenile Delinquency
An examination of the development of delinquency with a focus on etiology, risk factors, assessment, prediction, and developmental trajectories. Individual, group, and family institutional and community treatment approaches are examined.

PSYC 5025 [0.5 credit]
Topics in Forensic Psychology: Theory and Research
In-depth examination of theories and research in forensic psychology. Police stress, eyewitness memory, and risk assessment; theories and research that inform the assessment, treatment, and management of offenders.
PSYC 5026 [0.5 credit]
**Topics in Forensic Psychology: Methodology**
Overview of research methods in forensic psychology. Topics may include research ethics, the use of archival records, observational and interview techniques, questionnaire development, reaction time studies, longitudinal designs, and the analysis of physiological data.

PSYC 5104 [0.5 credit]
**Psychology of Women**
This seminar will consider and evaluate research concerning the psychology of women, including research methods, gender roles and gender differences.

PSYC 5107 [0.5 credit]
**Psychology of Family Violence**
Biopsychosocial antecedents and consequences of the abuse and neglect of children, partners and elders within the family. The efficacy of preventive and treatment strategies is also assessed, as are current controversies and research methods in the area.

PSYC 5208 [0.5 credit]
**Advances in Positive Psychology**
Overview and critical analysis of current theory and research in positive psychology; application of principles in organizations, schools, and the community. Topics may include positive youth development, perspectives on psychological wellness and growth, positive emotions, resilience, and mindfulness.

PSYC 5209 [0.5 credit]
**Topics in Health Psychology**
A critical examination of scientific theory and research in health psychology. Topics may include the biopsychological model of illness, stress and coping, psychoneuroimmunology, personality, and stress management.

PSYC 5300 [0.5 credit]
**Perceptual Processes**
Theoretical and empirical issues of the area of perception. Topics may include: psychophysics, constancies, depth perception, pattern recognition, iconic memory, attention, hemispheric specialization.

PSYC 5301 [0.5 credit]
**Psychophysics**
A study of classic and contemporary psychophysical methods. Applications to cognition will be included.

PSYC 5401 [0.5 credit]
**Multivariate Techniques**
Applications of multivariate statistical techniques with psychological data including multivariate analysis of variance, canonical correlation, discriminant function analysis, and factor analysis. Extensive use is made of statistical software. Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411.

PSYC 5407 [0.5 credit]
**Scale Development and Psychometrics**
This course will typically be designed to provide an in-depth understanding of the process of psychological scale development with respect to both the classical (i.e., reliability, validity) and the more modern (item response theory) psychometric approaches.
Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5411.

PSYC 5410 [0.5 credit]
**Advanced Analysis of Variance**
Concepts and applications of advanced analysis of variance designs, including factorial, within groups, and hierarchical designs, and analysis of covariance. Extensive use is made of statistical software.
Includes: Experiential Learning Activity

PSYC 5411 [0.5 credit]
**Advanced Regression**
Concepts and applications of advanced regression analyses, including multiple regression, hierarchical and polynomial techniques. Extensive use is made of statistical software.
Includes: Experiential Learning Activity

PSYC 5412 [0.5 credit]
**Topics in Advanced Statistics and Methods**
Selected topics in advanced statistics and research methods relevant to broad areas of psychology, varying from year to year. Topics may include broad analytic approaches, such as, program evaluation, qualitative methods, nonparametric statistics, among others.
Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411. This course also requires permission of the Department.

PSYC 5413 [0.25 credit]
**Workshops in Advanced Statistics and Methods**
Intensive focus on specific statistical or methodological approaches relevant to psychological research such as advanced factor analysis, meta-analysis, observational methods.
Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411. This course also requires permission of the Department.

PSYC 5414 [0.5 credit]
**Structural Equation Modeling**
An in depth examination of structural equation modeling (SEM) techniques. SEM involves the integration of path analysis and factor analysis. Basic issues such as model fitting and identification will be covered as well as more applied issues surrounding mediation and moderation testing in SEM.
Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411. This course also requires permission of the Department.
PSYC 5415 [0.5 credit]
Multilevel Modeling
An in depth examination of multilevel modeling (MLM). Students will develop the skills required to interpret and conduct multi-level data analysis, including longitudinal and nested designs, using hierarchical linear modeling software. The primary focus will be on two-level and three-level hierarchies. Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411. This course also requires permission of the Department.

PSYC 5416 [0.5 credit]
Advanced Survey Methods
Analysis of data from complex sample designs, including the development of selection and non-response weights, methods for handling and imputing missing data, the effects of stratification and clustering on estimation, and methods of variance estimation for complex sample designs. Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411. This course also requires permission of the Department.

PSYC 5417 [0.5 credit]
Categorical Data Analysis
This course will provide students with an in-depth understanding of several statistical techniques that can be used to analyze categorical data. Topics include contingency tables, log-linear analysis, logistic regression analysis with categorical predictors, continuous predictors, and interaction terms, and receiver operator characteristic (ROC) analysis. Includes: Experiential Learning Activity
Prerequisite(s): PSYC 5410 and PSYC 5411. This course also requires permission of the Department.

PSYC 5500 [0.5 credit]
Topics in Developmental Psychology: Methodology
A critical examination of methodology in developmental psychology. Topics may include observational and interview techniques, use of archival data, longitudinal designs, questionnaire development, and basic assessment methods. A research project will be required. Includes: Experiential Learning Activity

PSYC 5503 [0.5 credit]
Advanced Topics in Developmental Psychology: Social and Emotional Development
Recent developments in developmental psychology theory and research related to the study of social and emotional development. Topics may include child temperament, parenting and the family, peer relationships, self-system, and developmental psychopathology.

PSYC 5504 [0.5 credit]
Advanced Topics in Developmental Psychology: Cognitive Development
Recent developments in developmental psychology theory and research related to the study of cognitive development. Topics may include: language, literacy, numeracy, and theory of mind.

PSYC 5505 [0.5 credit]
Topics in Developmental Psychology: Theory and Research
Critical examination of scientific theory and research in developmental psychology. Special attention will be given to the mechanisms that account for change. Although most theories speak to the developmental of children, students will also have the opportunity to investigate theories of ageing.

PSYC 5601 [0.5 credit]
Topics in Personality Psychology
Current debates in personality research, with contemporary theoretical and research papers in personality. Topics may include the structure of personality and its evolutionary, experiential, biological, social, and cultural processes.

PSYC 5700 [0.5 credit]
Advanced Topics in Cognition I
An in-depth study of a specific topic in the area of basic cognitive processes. Topics will vary from year to year and may include judgmental processes, object identification, selective attention and spatial cognition.

PSYC 5703 [0.5 credit]
Topics in Cognitive Psychology
A critical examination of scientific theory and research in cognitive psychology. Topics may include detection and processing of sensory signals, pattern recognition, attention, mental imagery and automaticity.

PSYC 5800 [0.5 credit]
Special Topics in Psychology
The topics of this course will vary from year to year, and will be announced in advance of the registration period.

PSYC 5801 [0.5 credit]
Special Topics: Statistics
The topics of this course will vary from year to year, and will be announced in advance of the registration period.

PSYC 5802 [0.5 credit]
Special Topics: Professional Development
The topics of this course will vary from year to year, and will be announced in advance of the registration period.

PSYC 5804 [0.5 credit]
Special Topics in Health Psychology
The topics of this course will vary from year to year, and will be announced in advance of the registration period.

PSYC 5900 [0.5 credit]
Directed Studies
In-depth investigation of selected problems in psychology by means of directed library research. Registration is restricted, permission to register being granted only by the graduate committee. A final report must be filed in the departmental office prior to submission of course grade. Includes: Experiential Learning Activity
PSYC 5901 [0.5 credit]
Independent Research
Permission to register and approval of research plan must be obtained from the graduate committee. A final research report must be filed in the departmental office prior to submission of course grade. The course may be repeated for credit.
Includes: Experiential Learning Activity

PSYC 5903 [0.5 credit]
Practicum in Psychology
The practicum offers master's level students the opportunity to gain experience in a range of applied psychology settings with the goal of integrating academic and practical aspects of psychology. This course cannot be repeated for credit. Students will receive a grade of satisfactory or unsatisfactory.
Includes: Experiential Learning Activity

PSYC 5904 [0.5 credit]
Community Mental Health and Well-Being Practicum
Graded Sat/Uns.
Prerequisite(s): PSYC 5410 and PSYC 5411 with a grade of A- or higher and PSYC 5209 or other health-oriented course approved by the graduate supervisor, with a grade of A- or higher; and approval of the graduate supervisor.

PSYC 5906 [0.0 credit]
Pro-Seminar in Psychology
The pro-seminar is based on the departmental invited colloquia series. This course provides breadth in terms of exposure to research. Colloquia are offered from September to April.

PSYC 5909 [2.5 credits]
M.A. Thesis
Includes: Experiential Learning Activity

PSYC 6101 [0.5 credit]
Advanced Topics in Social Psychology
A higher-level critical examination of scientific theory and research in social psychology. Topics are taken from recent publications and debates in the discipline.

PSYC 6102 [0.5 credit]
Advanced Topics in Organizational Psychology
A higher-level critical examination of scientific theory and research in organizational psychology. Topics are taken from recent publications and debates in the discipline.

PSYC 6104 [0.5 credit]
Seminar in University Teaching
Theoretical and empirical work related to teaching in higher education. Analysis of instructional discourse, use of language in classroom decision-making, bases of effective practice and methods of instruction. Constructivist principles of teaching and learning. Role of teaching in university scholarship. Also offered at the undergraduate level, with different requirements, as ALDS 5204., for which additional credit is precluded.

PSYC 6114 [0.5 credit]
Teaching Practicum
The purpose of this course is to provide doctoral students who have an interest in developing their teaching skills with the opportunity for mentored practice within the discipline of psychology. Graded SAT/UNS.
Includes: Experiential Learning Activity

PSYC 6410 [0.5 credit]
Capstone Research Project in Quantitative Methods
Conduct an independent quantitative data analysis project that demonstrates a student's mastery of advanced quantitative techniques. This project may involve practical experience with an organization or agency when the principal activity extends the student's knowledge of quantitative techniques.
Includes: Experiential Learning Activity
Prerequisite(s): permission of the Department.

PSYC 6700 [0.5 credit]
Advanced Topics in Cognition II
An in-depth study of a specific topic in higher-level cognitive processes. Topics will vary from year to year and may include mathematical knowledge and processes, problem solving, or models of reading.

PSYC 6704 [0.5 credit]
Advanced Topics in Cognitive Psychology
A higher-level critical examination of scientific theory and research in cognitive psychology. Topics are taken from recent publications and debates in the discipline. Precludes additional credit for PSYC 5704 (no longer offered).

PSYC 6800 [0.5 credit]
Special Topics in Psychology
The topics of this course will vary from year to year, and will be announced in advance of the registration period.

PSYC 6900 [0.5 credit]
Directed Studies
In-depth investigation of selected problems in psychology by means of directed library research. Registration is restricted, permission to register being granted only by the graduate committee. A final report must be filed in the departmental office prior to submission of course grade.
Includes: Experiential Learning Activity

PSYC 6901 [0.5 credit]
Independent Research
Permission to register and approval of research plan must be obtained from the graduate committee. A final research report must be filed in the departmental office prior to submission of course grade. The course may be repeated for credit.
Includes: Experiential Learning Activity
PSYC 6903 [0.5 credit]
Practicum in Psychology
The practicum offers Ph.D. students the opportunity to gain experience in a range of applied psychology settings with the goal of integrating academic and practical aspects of psychology. This course cannot be repeated for credit. Students will receive a grade of satisfactory or unsatisfactory.
Includes: Experiential Learning Activity

PSYC 6906 [0.0 credit]
Pro-Seminar in Psychology I
The pro-seminar is based on the departmental invited colloquia series. This course provides breadth in terms of exposure to research. Colloquia are offered from September to April.
Includes: Experiential Learning Activity

PSYC 6907 [0.0 credit]
Pro-Seminar in Psychology II
The pro-seminar is based on the departmental invited colloquia series. This course provides breadth in terms of exposure to research. Colloquia are offered from September to April.
Includes: Experiential Learning Activity

PSYC 6909 [0.0 credit]
Ph.D. Thesis
Includes: Experiential Learning Activity