I. Preface

Welcome to the Psychology Department!

This handbook was written for you, the University of Scranton psychology student, to provide information on the department, to clarify curriculum offerings, and to feature the exciting opportunities in psychology today.

As faculty advisors, we find that students have many good questions about psychology. Some examples are "What courses should I take?", "What kinds of careers in psychology are there?", "Is research really helpful?", and "How do I get involved?" We hope that this guide will answer such questions and enhance communication between faculty and students.

The ultimate objective of the University of Scranton’s Psychology Handbook and the entire psychology program is to facilitate your learning. That learning should be factual, exciting, and fun. We hope that you and we, as lifetime students of psychology, will actualize the Latin origins of student, which is studere, meaning to be zealous, to aspire, to desire. In short, catch the fever of psychology!

We would like to thank the many people who have helped in the preparation of this Handbook over the years. We publicly thank the American Psychological Association, Dr. Joseph Palladino, the National Research Council, National Center for Education Statistics, and Guilford Press for their permission to reproduce published material. We are indebted to the psychology faculty and to the many psychology students who have shared their experiences with us.

We appreciate the contributions of Dr. J. Timothy Cannon and Dr. John C. Norcross who co-edited and coordinated publication of this Handbook up to 1994. From 1994 to 2017, the handbook was edited and coordinated by Dr. James P. Buchanan. Special thanks goes to Ms. Donna M. Rupp, our administrative professional, for her work in preparing a new edition each year.
II. The Psychology Department

The University of Scranton Psychology Department is proud of the four major components of a quality education: curriculum, faculty, students, and facilities.

Curriculum
The psychology major has been carefully designed to give students a balanced education in the discipline and the widest range of career options, from baccalaureate entry-level positions to graduate training in prestigious universities. In fact, 30 years of post-graduation data reveal that half of our psychology majors immediately enter into graduate school and half proceed directly to full-time employment.

The Psychology Department encourages students to tailor their programs to their own needs and interests. For example, students interested in marketing, personnel, or industrial-organization psychology may elect a business minor. Psychology majors interested in clinical careers frequently take minors in Counseling/Human Services and Sociology/Criminal Justice. Interdisciplinary programs, such as the Human Development Concentration, and dual majors with a number of other departments are also available.

Section IV of this Handbook is entirely devoted to the course requirements and curriculum offerings of the Psychology Department.

Faculty
Our eleven full-time faculty all hold doctoral degrees in psychology and are actively involved in research spanning the discipline: clinical, cognitive, developmental, evolutionary, health, industrial-organizational, learning, physiological, perception, and social. In addition to their teaching commitments, faculty members supervise research, publish regularly, review for journals, edit journals, and coordinate grants. Additional information on the faculty is provided in Section III of this Handbook.

Students
Our Psychology majors are energetic and social. They sponsor three departmental student organizations: the Psychology Club, Psi Chi, and the Association for Psychological Science Student Caucus.

The Psychology Club is open to any university student interested in psychology. Annual events include a fall picnic and community service projects.

Psi Chi is the International Honor Society in Psychology with chapters in 759 universities in all 50 states. The local chapter is composed of psychology majors in the upper 35% of their class in general scholarship and of superior scholarship in psychology. Each year Psi Chi organizes an initiation dinner and a trip to a regional convention.

The local chapter of the Association for Psychological Science Student Caucus (APSSC) was organized in 1991 to promote critical thinking and discussion of topics related to psychology. It frequently meets with and cosponsors events with the Psychology Club.
Facilities
The department has over 2,500 feet of dedicated research space across Alumni Memorial Hall (AMH), Loyola Science Center (LSC), and the Institute for Molecular Biology and Medicine (IMBM). This includes computer-based laboratories for biopsychology, developmental, clinical, human electrophysiology, information processing, psycholinguistic, and social psychology research. Environmentally-controlled animal facilities and neuroscience laboratories are housed in LSC.

The department is at the forefront of computer applications. We have more than 50 Pentium-based computers connected through a high speed network to the University’s main computer, laser and color printers, and other input/output devices. This network allows ready access to wordprocessing, statistical packages, computer-assisted instruction, graphics, data analysis, and library research. The department’s computer laboratory is equipped with 10 PC stations. Also included on the psychology floor are two mediated classrooms and one mediated seminar room.

The Psychology Department is a charter member of the Council of Undergraduate Psychology Programs. We are also a liaison institution of the Eastern Psychological Association (EPA) and a member of the Council on Undergraduate Research (CUR).

Facts and Figures
The effectiveness of the University of Scranton psychology program is demonstrated in part by the following achievements:

- Annual surveys of our graduating seniors show widespread satisfaction with the program. For instance, in Spring 2018, our graduating psychology seniors gave the overall program a mean score of 3.4 (out of 4.0) and a 3.6 for quality of teaching in psychology courses.
• A notable proportion of our graduates go on to Ph.D. programs in psychology with financial assistance. Research at Franklin and Marshall College shows that, over the last decade for which data were analyzed, the University of Scranton ranked 24th out of 254 comparable four-year, private institutions as the baccalaureate source of Ph.D.s in Psychology.

• Our students' knowledge of psychology is well above the national average. This is reflected in their performance on the Graduate Record Examination (GRE) Psychology Subject Test and the Educational Testing Service (ETS) Major Field Achievement Test in Psychology. Compared to other institutions, University of Scranton students score at the 75th percentile on the psychology achievement test.

• Psychology majors continue to conduct and present research at a significant rate. In the 2017 - 2018 academic year, for example, 18 current and past psychology undergraduates co-presented a paper or co-authored an article/book chapter with psychology faculty members.

• An indirect measure of instructional and faculty quality are awards bestowed by independent bodies. Drs. John Norcross and J. Timothy Cannon were honored as the Pennsylvania Professor of the Year by the Carnegie Foundation. Drs. Bryan Burnham and Jessica Nolan each received Provosts’ Teaching Awards in 2018.
III. The Faculty

*denotes student co-author of the publication or presentation.

Bryan R. Burnham, Ph.D.

Dr. Burnham received his baccalaureate from Utica College of Syracuse University and his doctorate in experimental and cognitive psychology/science from the University at Albany (SUNY) in 2007. He teaches Statistics, Sensation and Perception, Cognitive Psychology, and Research Methods. His Human Attention Lab (HAL) examines factors that govern the control of attention, interference and executive attention, working memory, object attention, and the neuroscience of attention. Representative research:


J. Timothy Cannon, Ph.D.

Dr. Cannon received his baccalaureate from the University of Scranton and his doctorate in experimental/physiological psychology from the University of Maine in 1977. He did post-doctoral work at UCLA in the fields of pain inhibition and endorphins. He teaches Behavioral Neuroscience and Conditioning and Learning. His research interests include responses to environmental enrichment as well as how human facial characteristics are related to intelligence, personality, and political attitudes. Representative research:


Emily J. Hopkins, Ph.D.

Dr. Hopkins earned her bachelor’s degree in cognitive neuroscience from Brown University and her master’s and Ph.D. (2014) in psychology from the University of Virginia. She completed postdoctoral fellowships at the University of Pennsylvania and Temple University. Her research focuses on the role of play and fictional media in early childhood, particularly in how play and stories can be used as educational tools. Dr. Hopkins teaches Fundamentals of Psychology and Childhood.

Representative research:


Christie P. Karpiak, Ph.D.

Dr. Karpiak earned her baccalaureate, master’s degree, and doctorate (1999) from the University of Utah, and completed her clinical internship at the University of North Carolina Medical Center. She teaches Abnormal Psychology, Statistics, Abnormal Child Psychology, and Child Clinical Psychology. Her clinical interests focus on children and adolescents. Her research interests include therapy process and outcome, and the role of social/interpersonal interactions in the development of behavioral and emotional problems and personality patterns. Representative work:


Karpiak, C. P. (2012, August). *Adherence to the IRT model is linked to psychotherapy outcome*. Presented at the annual meeting of the American Psychological Association, Orlando, FL.


Gail N. Kemp, Ph.D.

Dr. Kemp earned her baccalaureate from Harvard College, master’s in public health, master’s in clinical psychology, and doctorate in clinical psychology (2018) from Boston University. She completed her clinical internship at Franciscan Children’s in Boston, MA. She teaches Abnormal Psychology, Psychological Testing, and Cognitive-Behavioral Therapy. Her clinical interests include parent, child, and family interventions for youth internalizing disorders. Her research interests include the cultural context of clinical care, parenting interventions, family expressed emotion, and community sources of chronic stress and psychopathology risk. Representative research:


Barry X. Kuhle, Ph.D.

Dr. Kuhle received his baccalaureate from Binghamton University and his doctorate in evolutionary psychology from the University of Texas at Austin in 2002. He teaches Evolutionary Psychology, Fundamentals of Psychology, and Statistics in the Behavioral Sciences. His research focuses on the evolved psychological mechanisms that underlie sex differences in humor production, mate preferences, and romantic jealousy, the evolution of both sexual fluidity and reproductive senescence in women, and how women and men advertise themselves and what they report seeking on *Tinder*. Representative research:


Jessica M. Nolan, Ph.D.

Dr. Nolan received her baccalaureate from Cornell University, her master’s degree from California State University, San Marcos, and her doctorate in experimental psychology (social concentration) from the University of Arkansas in 2008. She teaches Social Psychology, Environmental & Conservation Psychology, Psychology of Diversity, Industrial/Organizational Psychology, and Statistics. Her research focuses on the application of social psychological tools and principles to understand and solve social and environmental problems. She also conducts basic research on social norms and social influence processes. Representative research:


John C. Norcross, Ph.D.

Dr. Norcross received his baccalaureate from Rutgers University, earned his doctorate in clinical psychology from the University of Rhode Island, and completed his internship at the Brown University School of Medicine. He is a board-certified clinical psychologist and is past president of the APA Society of Clinical Psychology. He teaches Career Development in Psychology, Clinical Psychology, Field Experience in Clinical Settings, and the Senior Seminar. His research interests center on psychotherapy, self-help, undergraduate education, and admission to graduate school. Representative research:


Patrick T. Orr, Ph.D.

Dr. Orr received his baccalaureate from the University of Scranton and his doctorate in psychology, with specialization in behavioral neuroscience, from Yale University. He teaches Statistics, Behavioral Neuroscience, and Research Methods in Neuroscience. His research interests include steroidal and environmental influences on memory. Representative research:


**Carole S. Slotterback, Ph.D.**

Dr. Slotterback received her baccalaureate from Wilson College, her master's degree from New Mexico Highlands University, and her doctorate from Northern Illinois University in 1994. She was a postdoctoral fellow in the Elderly Care Research Center at Case Western Reserve University. She teaches Adulthood and Aging, and Child Psychology. Her research interests include attitudes toward the elderly, older adults' attitudes toward other age groups, and analyzing children's letters to Santa Claus. Representative research:


**Jill A. Warker, Ph.D.**

Dr. Warker received her baccalaureate from Bucknell University and her doctorate in cognitive psychology from the University of Illinois at Urbana-Champaign. She was a postdoctoral researcher in the Language Production Lab at the University of California, San Diego. She teaches Cognitive Psychology, Cognitive Neuroscience, Psychology of Language, and Research Methods. Her research interests include learning, memory, language production, and language acquisition. Representative research:


**Professor Emeritus**

John J. O’Malley, Ph.D.
Teaches History & Literature of Psychology I, Exercise & Sport Psychology

**Part-Time Psychology Faculty**

Samantha Fitz-Gerald, Psy.D.
Teaches Adulthood & Aging

Michael Oakes, Ph.D.
Teaches Fundamentals of Psychology, Drugs & Behavior, Brain & Human Nature

Carl Schuster, Ph.D.
Teaches Personality, Abnormal Psychology

Joseph A. Tellish, Ph.D.
Teaches Fundamentals of Psychology, Behavior Modification
IV. The Curriculum

*The Psychology Major*

I. Psychology majors are required to take the following courses:

- Fundamentals of Psychology (Psyc 110)
- Research Methods & Statistics I (Psyc 211)
- Research Methods & Statistics II (Psyc 212)
- Career Development Seminar in Psychology (Psyc 390)
- History and Literature I & II (Psyc 490 & 491)

II. Students also take a minimum of 5 courses from the following list, with at least one from each group.

- **Social-Developmental Processes**
  - Social Psychology (Psyc 220)
  - Childhood (Psyc 221)

- **Individual Processes**
  - Personality and Individual Differences (Psyc 224)
  - Abnormal Psychology (Psyc 225)

- **Physiological Processes**
  - Sensation and Perception (Psyc 230)
  - Behavioral Neuroscience (Psyc 231)

- **Learning Processes**
  - Cognitive Psychology (Psyc 234)
  - Conditioning and Learning (Psyc 235)

It is recommended that students take at least one course from each of the preceding groups by the completion of their fifth psychology elective (normally, by the end of the Fall semester of the junior year).

III. An additional four electives are required from any of the courses listed above or below. Special Topics in Psychology can be used only once to satisfy major elective requirements.

- **Psychology Electives**
  - Adulthood and Aging (Psyc 222)
  - Adolescence (Psyc 223)
  - Health Psychology (Psyc 228)
  - Psychology of Language (Psyc 232)
  - Evolutionary Psychology (Psyc 233)
  - Industrial/Organizational Psychology (Psyc 236)
  - Psychology of Women (Psyc 237)
Exercise and Sport Psychology (Psyc 238)
Environmental and Conservation Psychology (Psyc 239)
Special Topics in Psychology (Psyc 284 and 384)
Multivariate Statistics (Psyc 310)
Abnormal Child Psychology (Psyc 325)
Couple and Family Therapy (Psyc 334)
Psychological Testing (Psyc 335)
Psychopharmacology (Psyc 339)
Cognitive Neuroscience (Psyc 350)
Clinical Psychology (Psyc 360)
Cognitive Behavior Therapy (Psyc 361)
Child Clinical Psychology (Psyc 362)
Behavior Modification (Psyc 363)
Psychology of Diversity (Psyc 364)
Field Experience in Clinical Settings (Psyc 480)
Field Experience in Applied Settings (Psyc 481)
Advanced Topics Seminar (Psyc 492)
Undergraduate Research (Psyc 493-494) (Typically taken as GE Elective credits)

The following page outlines the sequence of psychology courses psychology majors should take, including total credits. This is the same information contained in the 2018-2019 University catalog.

Not everyone will fit neatly into this grid, of course. Perhaps you have changed your major to psychology after starting another major, perhaps you are a double major, or "ahead" by taking summer courses. In these situations, your advisor will be helpful (see Section VI on Advising and Section VII on Planning Your Curriculum).

**The Psychology Minor**

A minor in psychology consists of Psyc 110, Psyc 210, Psyc 330 Lecture (a specific section for minors), and one course from three of the following four groups: Social-Developmental Processes (220, 221), Individual Processes (224, 225), Physiological Processes (230, 231), and Learning Processes (234, 235).

An equivalent statistics course and/or an equivalent research methods course may be substituted for Psyc 210 (Statistics) and/or Psyc 330 (Research Methods). Any substituted course must be replaced with a 3-credit Psychology course. Total: 18 credits in Psychology.
### The Psychology Curriculum

#### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Fall Cr.</th>
<th>Spr. Cr.</th>
</tr>
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<tbody>
<tr>
<td>MAJOR</td>
<td>PSYC 110 - (S) Fundamentals of Psychology - PSYC. Elective</td>
<td>3</td>
<td>3</td>
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<tr>
<td>GE EP</td>
<td>PSYC 140 – (FYOC/FYDT) Current Topics in Psychological Science</td>
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<tr>
<td>GE QUAN</td>
<td>MATH - Mathematics</td>
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</tr>
<tr>
<td>GE S/BH</td>
<td>SOC 110 - (S) Introduction to Sociology (recommended)</td>
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<td></td>
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<tr>
<td>GE WRTG</td>
<td>WRTG 107 - (FYW) Composition</td>
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<tr>
<td>GE HUMN</td>
<td>HUMN ELECT - Humanities Elective</td>
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<tr>
<td>GE PHIL</td>
<td>PHIL 120 - Introduction to Philosophy – PHIL 210 - Ethics</td>
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<td>3</td>
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<tr>
<td>GE FSEM</td>
<td>First Year Seminar (FYS)</td>
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#### Second Year

<table>
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<th>Spr. Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAJOR</td>
<td>PSYC 211 – Research Methods and Statistical Analysis I</td>
<td>4</td>
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<tr>
<td>MAJOR</td>
<td>PSYC 212 – (EP2W) Research Methods and Statistical Analysis II</td>
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<tr>
<td>MAJOR</td>
<td>ELECT - Psychology Electives</td>
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<td>3</td>
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<tr>
<td>GE ELECT</td>
<td>FREE ELECT</td>
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<td></td>
</tr>
<tr>
<td>GE NSCI</td>
<td>NSCI ELECT - Elective- Elective</td>
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<td>3</td>
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<tr>
<td>GE S/BH</td>
<td>S/BH ELECT - Soc/Beh Science Elective</td>
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<tr>
<td>GE HUMN</td>
<td>HUMN ELECT - Humanities Elective</td>
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<td></td>
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</table>

#### Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Fall Cr.</th>
<th>Spr. Cr.</th>
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</thead>
<tbody>
<tr>
<td>MAJOR</td>
<td>MAJOR ELECT - Psychology Electives</td>
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<tr>
<td>MAJOR</td>
<td>PSYC 390 - Career Development in Psychology</td>
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<tr>
<td>GE ELECT</td>
<td>ELECT- Elective</td>
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<tr>
<td>GE HUMN</td>
<td>HUMN ELECT - Humanities Electives</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>GE T/RS</td>
<td>T/RS 121 - (P) Theology I: Introduction to the Bible</td>
<td>3</td>
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<tr>
<td>GE T/RS</td>
<td>T/RS 122 - (P) Theology II: Introduction to Christian Theology</td>
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<td>15</td>
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#### Fourth Year

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<th>Fall Cr.</th>
<th>Spr. Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAJOR</td>
<td>MAJOR ELECTIVE - Psychology Elective</td>
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<td></td>
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<tr>
<td>MAJOR</td>
<td>PSYC 490 - History and Literature of Psychology I</td>
<td>1.5</td>
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</tr>
<tr>
<td>MAJOR</td>
<td>PSYC 491 - (EP2W) History and Literature of Psychology II</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>GE PHIL/T/RS</td>
<td>PHIL ELECT- Philosophy or T/RS ELECT - T/RS Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>GE ELECT</td>
<td>FREE ELECT - Free Electives</td>
<td>9</td>
<td>15</td>
</tr>
</tbody>
</table>

#### Total: 120 Credits
V. Psychology as a Major

As a major, psychology provides a unique educational experience of quality, breadth, and flexibility. U.S. Department of Education surveys reveal that psychology is the third or fourth most popular undergraduate major. Our curriculum has been carefully designed to give students a comprehensive education in the discipline and the widest range of options, from baccalaureate-level positions to graduate training in prestigious universities.

**Baccalaureate-Level Positions**

Surveys of human service agencies within the Commonwealth of Pennsylvania indicate the need for baccalaureate-level job candidates. For entry-level positions, 96% of these facilities hire baccalaureate graduates who comprise, on the average, 46% of the staff. Additionally, a recent study found that psychology majors are strong candidates for a number of positions in business and industry, including management, personnel, public relations, and sales. Many of our students enter these and related fields. Section XII of this Handbook describes the variety of careers available to students with a bachelor's degree in psychology.

**Graduate School Preparation**

Historically, the department has produced a large number of students who enter graduate training. In fact, the University of Scranton ranks in the top 10% of comparable institutions nationally in terms of students who go on to earn doctorates in psychology. The majority of these students have received funded assistantships and other forms of financial support. Section XIII of this Handbook presents graduate school opportunities in greater detail. When preparing for entry into graduate programs, research indicates that doctoral programs, regardless of specialization, are interested in undergraduates who are well prepared in courses selected from those that we have required in our "core eight."

**Psychology Career Paths**

Psychology is a diverse and evolving discipline. The required and core eight courses in the major provide a broad background for making a knowledgeable choice of specialty area. When a specialty area has been chosen, you can use the recommended course selections below to allow for some focused training. Remember, however, graduate programs typically are looking for students who possess a broad background in psychology. These recommended courses provide the icing on your educational cake.

**Clinical/Counseling/School Psychology**

The courses recommended here provide a synthesis of scientific knowledge, interpersonal development, and clinical experience. These courses are suggested for psychology majors seeking entry-level employment or graduate training in clinical, counseling, and school psychology. They would also be good preparation for those considering entry into social work, counseling, and family therapy.

These recommended courses provide a firm grounding in psychopathology, interviewing skills, clinical assessment, and psychological treatment. In their junior or senior year, students may complete for academic credit a supervised practicum in the community for
hands-on experience. Additionally, students are encouraged to take one course in a targeted clinical population or a specific treatment. This choice can match students' personal interests and career goals.

The first four courses are presented in the general order in which they should be taken.

(1) Abnormal Psychology (Psyc 225; Freshman or Sophomore year)
(2) Clinical Psychology (Psyc 360; Fall of Junior year)
(3) Psychological Testing (Psyc 335; Junior or Senior year)
(4) Field Experience in Clinical Settings (Senior year, or end of Junior)
(5) One course from the following list: (Senior Year)
   - Addictions (HS 421—Don't worry about the number, it has no prerequisites)
   - Abnormal Child Psychology (Psyc 325)
   - Behavior Modification (Psyc 363)
   - Couple and Family Therapy (Psyc 334)
   - Cognitive-Behavior Therapy (Psyc 361)
   - Case Management and Interviewing (HS 241)
   - Child Clinical Psychology (Psyc 362)

Students interested in this area are encouraged to take Behavioral Neuroscience (Psyc 231).

An indication of the courses that graduate schools in clinical/counseling psychology are seeking can be seen in the following table. These data are based on a survey of 217 APA approved clinical psychology programs. These data actually underestimate the relevant percentages, because many programs simply responded that they required/recommended that applicants have a major in psychology.

**Undergraduate Courses Required or Recommended by APA-Accredited Clinical and Counseling Psychology Programs**

Percentage of programs in which this course is:

<table>
<thead>
<tr>
<th>Psychology Course</th>
<th>Required</th>
<th>Choose among required</th>
<th>Recommended</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>53</td>
<td>6</td>
<td>33</td>
<td>92</td>
</tr>
<tr>
<td>Research methods/design</td>
<td>37</td>
<td>9</td>
<td>27</td>
<td>73</td>
</tr>
<tr>
<td>Abnormal/psychopathology</td>
<td>32</td>
<td>3</td>
<td>28</td>
<td>63</td>
</tr>
<tr>
<td>Developmental/child</td>
<td>12</td>
<td>3</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>Personality</td>
<td>14</td>
<td>4</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>Physiological/biopsychology</td>
<td>8</td>
<td>5</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>Social psychology</td>
<td>7</td>
<td>4</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>Psychological testing/assessment</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Learning and conditioning</td>
<td>4</td>
<td>6</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Cognitive psychology</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>History and systems</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Clinical/psychotherapy</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Field experience</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

**Source:** Norcross, Sayette, Stratigis, & Zimmerman (2014).


**Biopsychology/Physiological Psychology**

Here we recommend courses relevant to understanding the biological foundations of behavior. They provide the background necessary for admission into traditional physiological/bio psychology graduate programs. The track would also enhance the prospects of those students seeking entry-level research positions in the pharmaceutical or biomedical industries.

Students interested in this area should keep the following recommendations in mind. The first three courses should be taken as soon as possible in your undergraduate career. For example, Biology 141 and 142 can be taken in the freshman year. Toward this end, the Math course scheduled in the freshman year may be deferred until a later time. Students are encouraged to take Math 114 to satisfy the department's math requirement. Optimally, Psyc 231 should be taken in the first semester of the sophomore year. The remaining courses need not be taken at any particular time or in any particular sequence.

- General Biology (Biology 141 & 142)
- Behavioral Neuroscience with lab (Psyc 231 & 231L)
- General and Analytical Chemistry (Chem 112 & 113)
- Abnormal Psychology (Psyc 225)
- Childhood (Psyc 221)
- Cognitive Neuroscience (Psyc 350)
- Two of the following with their accompanying labs:
  - Sensation and Perception (Psyc 230 & 230L)
  - Conditioning and Learning (Psyc 235 & 235L)
  - Cognitive Psychology (Psyc 234 & 234L)

With their career goals in mind, students should consider selecting courses in Biology, Chemistry, Neuroscience, Physics, and Computer Science to fulfill their remaining credit requirements in the GE and Free Electives. An additional consideration in planning coursework within these areas is the desirability of taking up to 6 credits of Undergraduate Research (Psyc 493-494).

**Cognitive Psychology**

The following courses have been selected for students interested in human cognition and cognitive science. These courses encompass the five traditional areas of Cognitive Science: Cognitive Psychology, Neuroscience, Computer Science, Philosophy, and Linguistics. These courses are designed for students seeking both entry-level employment and graduate training in cognitive psychology, human factors, or cognitive science.

I. Recommended Courses in Psychology

- Cognitive Psychology & Lab (Psyc 234)
- Sensation and Perception & Lab (Psyc 230)
- Behavioral Neuroscience & Lab (Psyc 231)
- Psychology of Language (Psyc 232)
- Cognitive Neuroscience (Psyc 350)
II. Recommended Courses Outside of Psychology

Computer Science I (CMPS 134)
Logic (Phil 215)

Related Academic Programs

Minors, concentrations, and double majors outside of the psychology program are possible and sometimes desirable. Many minors and concentrations and even some majors can be combined with a psychology major by adding few, if any, additional courses. This requires careful planning and two advisors, one in each program, to ensure that all the requirements will be met.

An academic program of special interest to University of Scranton psychology students is the Human Development Concentration. Dr. Slotterback coordinates this concentration attractive to many students.

Human Development Concentration

The 30-credit interdisciplinary concentration requires few courses beyond those associated with the psychology major, particularly for those students following the recommended courses for students interested in clinical/counseling psychology. The concentration requires the following:

1. Childhood (Psyc 221)
2. Adulthood & Aging (Psyc 222) or Introduction to Gerontology (Gero 110)
3. Abnormal Psychology (Psyc 225)
4. Case Management & Interviewing (HS 241)
5. Clinical Psychology (Psyc 360) or Counseling Theories (HS 242)
6. Anatomy & Physiology (Bio 201) or ABC's of Genetics (Bio 202) or Behavioral Neuroscience (Psyc 231)
7. Three of the following courses with at least one course from the cultural diversity group of:
   Cultural Anthropology (Soc 234),
   American Minority Groups (Soc 224),
   Marriage and the Family (Soc 210),
   Abnormal Child Psychology (Psyc 325),
   Family Development (HD 224),
   Multiculturalism in Human Services (HS 333),
   Psychology of Women (Psyc 237),
   Juvenile Delinquency (S/CJ 214)
and at least one course from the applied skills group of:
   Educational Psychology (Educ 222),
   Early Childhood Education (Educ 140),
   Child Welfare (Soc 118),
   Group Dynamics (HS 341),
   Psychiatric Rehabilitation (HS 323),
   Couple and Family Therapy (Psyc/HD 334),
   Marital and Family Counseling (HS 334),
   Cognitive Behavior Therapy (Psyc 361),
   Behavior Modification (Psyc 363)
8. Field Experience in Clinical Psychology (Psyc 480) or Internship in Human Services (HS 380)

*Industrial-Organizational or Personnel Psychology*

For students interested in personnel, or industrial-organizational psychology, a business minor is recommended. I/O Psychology (Psyc 236) and Psychological Testing (Psyc 335) are also strongly suggested.
VI. Advising

The Psychology Department is proud of its systematic and informed advising of students. Several recent enhancements in the advising process have improved it further.

- This *Psychology Handbook* represents the department's consensus on a number of vital advising issues ranging from career choices to course recommendations. The *Handbook* is provided gratis to all majors, incoming and transfer, so that you have an extensive database from which you can draw for academic planning.

- Students are assigned to a single advisor from their sophomore through senior year in the Psychology Department. This approach allows advisors and advisees to know each other better over the years. (All freshmen are advised by the CAS Academic Advising Center.)

- The department requires a 1-credit Career Development Seminar in Psychology. This junior seminar entails studying, discussing, and applying information on academic planning, career development, and graduate school.

- The Psychology Department Advising Resource Page on our web page provides students with a list of psychology faculty advisors, the master schedule for the current year, a listing of the psychology curriculum, a psychology curriculum worksheet, and a pre-advising checklist.

*How To Use Your Advisor*

Sometimes students think that they need a reason to see their advisor, such as for signatures or changing their major. This is a fallacy. When you have questions, go to your advisor. He or she is also there to get to know you as a person. It's fine to go in to talk over a range of things -- your major, a course, any concerns, your career, or simply school in general.

When you go to see your advisor, go in with the attitude that he or she is there to be your *advocate*.

Sometimes your advisor may be busy, preoccupied, or unavailable. In these cases, check your advisor's office hours and make an appointment. Advisors often welcome the chance to chat informally with students. Since a diversity of interactions is useful, approach other psychology professors as well, especially those who have expertise in the subfield in which you are interested.

*Responsibilities of Advisees*

The psychology faculty takes the responsibility of departmental advising seriously and expects students to do the same. In order for us to advise you effectively, you should, at a minimum, do the following (as listed in the *Undergraduate Advising Handbook*):

- Maintain a personal academic file. This file should include an updated CAPP, copies of any schedule changes, and paperwork related to grades.

- Read the Undergraduate Catalog and this *Psychology Handbook*. Become familiar
with the psychology major (and minor, if applicable), the general education requirements, and all academic regulations. Consult the catalog descriptions of courses you plan to take to ensure that you have satisfied the prerequisites.

- Keep us informed of changes in your program. If you declare a minor, concentration, or second major, please inform us. If you participate in the SJLA or the Honors program, consult both your departmental advisor and program director. If you plan to study abroad, consult with your psychology advisor early in the planning process and during your time abroad.

- Allow adequate time for advising during registration. Consult your advisor's office hours and make an appointment to see him or her as early as possible during the registration period. Also examine your CAPP sheet carefully and bring any potential discrepancies to the attention of your advisor.

Note: If you do not make genuine effort to obtain advising at least one day before the pre-registration deadline, then you will be denied your PIN. This will mean that you cannot register for classes at the assigned time. The moral of the story is to seek out your advisor early and often during the pre-registration period.

**Advising Hints**

1. Psychology majors have 30 credits of free electives. Up to 15 credits of psychology can be put in the free electives. Undergraduate Research in Psychology (Psyc 493-494) credits should be placed in the free electives.
2. Only one Special Topics course can be used as a Psychology elective. Any additional Special Topics courses will be placed in the free electives.
3. Be aware that you can develop minors and concentrations by judiciously using free electives.
4. The GE requirements need not be taken in the sequence set out in the catalog. You have a great deal of flexibility in this regard.
5. Take a diversity of core psychology courses early in your undergraduate career and strive for breadth of exposure in psychology.
6. Core courses may also count as psychology electives; that is, a student who takes one course in a pair to satisfy the "core requirement" may take the other course as a psychology elective.
7. Be aware of the scheduling of courses, particularly those offered only one time per year. This will facilitate your curriculum planning.
8. Note the importance of Abnormal Psychology as a prerequisite for later courses in clinical/counseling/school psychology.
9. Be aware of the option of taking any combination of two elective psychology labs and/or advanced topics seminars in place of a three-credit psychology elective.
10. Review the criteria for taking Undergraduate Research in Psychology to avoid confusion.
11. Realize that you can tailor the psychology major towards your interests. Consult with advisors for recommended courses to meet your individual interests for employment and/or graduate school.
12. For Psychology Field Experience courses, complete all the prerequisites ideally by the Spring of the junior year or Fall of the senior year.
13. Understand and exercise your role in the advising process. Advising is not just something the professor does. It is an active, collaborative process requiring your preparation.
14. Schedule an advising conference far enough in advance of registration that substantive advising can take place. Waiting until the last minute will make it difficult to advise you adequately.
PREADVISING CHECK LIST

Please check the boxes that apply to you and be prepared to discuss them.

REVIEW OF LIFE CIRCUMSTANCES CHANGES
☐ Want to discuss changes in life circumstances (e.g., marriage, work, finances, health)?
☐ Want to discuss how college life is going for you?

REVIEW OF PREVIOUS SEMESTER/S
☐ Any transfer credits not yet recorded?
☐ Any deficient or incomplete grades?
☐ Any failed or dropped courses?

REVIEW OF CURRENT SEMESTER
☐ Any deficient grades at midterm or dropped courses this semester?

DOUBLE MAJORS, CONCENTRATIONS, MINORS, HONORS
☐ Any recently added or dropped programs not previously on CAPP sheet?
☐ Want to discuss dropping a program or adding a new program?
☐ Need to discuss completing your current program(s) in remaining semesters?
☐ Want to discuss study abroad?

PROGRESS TOWARDS GRADUATION
☐ Are you behind on credits to graduate or want to determine if you are on schedule to graduate?
☐ Need to discuss a plan to complete your GE requirements over the remaining semesters?
☐ Need to discuss completing the writing intensive and cultural diversity requirements?

PROGRESS IN PSYCHOLOGY MAJOR
☐ Are you behind schedule for completing required courses and core sequence?
☐ Want to discuss your schedule for completing the 42 total credits for Psychology?
☐ Are you behind schedule for completing the required GE courses?  ☐ Math?  ☐ NSCI?

PLAN FOR UPCOMING SEMESTERS
☐ Want to discuss course selections for the Psychology major?
☐ Want to discuss course selections for GE, other programs or free electives?

FUTURE PLANS
☐ Want to discuss your plans for post-graduation life?
☐ Want to discuss your plans for preparing for the GREs?
☐ Want to discuss plans for doing research or being a TA?
☐ Want to discuss volunteering or doing an internship?

CAPP SHEET
☐ Want to review the accuracy of your CAPP sheet?
☐ Need help correcting CAPP sheet errors?

OTHER GOALS AND CONCERNS YOU WISH TO DISCUSS (list below)
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<th>Course Name</th>
<th>Term Taken</th>
<th>Comments</th>
<th>Course #</th>
<th>Course Name</th>
<th>Term Taken</th>
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<td><strong>Psychology Curriculum Worksheet</strong></td>
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<td></td>
<td><strong>Requirements are in bold. Recommendations are in italics.</strong></td>
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<td>EPI course</td>
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<td>MATH 103, 106, or 1144</td>
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<td>Sophomore</td>
<td>Psyc 211 Research Methods &amp; Statistics I</td>
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<td>Psyc 212 Research Methods &amp; Statistics II</td>
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<td>Psyc Elective (from Core 8)</td>
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<td>NSCI BIOL NSCI Biology Elective</td>
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<td>GE Any GE Elective</td>
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<td>Junior</td>
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<td>T/RS 121 Theology I</td>
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<td>Senior</td>
<td>Psyc Elective</td>
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<td></td>
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<td></td>
<td>Phil or Theo elective</td>
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<td>Elective</td>
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<tr>
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<td>Elective</td>
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</tbody>
</table>
Plan on completing 4 out of 5 of the core psychology classes by the Spring term of your Junior year.

If you plan to take the GRE Psychology test in the Fall of your Senior year, try to take as many (e.g., more than 5) of the core 8 psychology electives before then. This may mean loading up on psychology credits in your Sophomore and Junior years and pushing GE credits to your Senior year.

For the core 8, Behavioral Neuroscience (Fall) and Conditioning and Learning (Spring) are typically offered only ONCE a year. If you plan on taking these classes, plan ahead and plan the rest of your schedule around them.

To conduct research, you do NOT have to take it for credit. Start with volunteering or FSRP (both of which are free), and then take Undergraduate Research (PSYC 493 & 494) for credit. You may take Undergraduate Research in units of 1-3 credits, with a maximum of 6 credits counting toward your degree.

If you are interested in Biology or Neuroscience, do NOT take the biology classes for psychology students. Take the biology classes for Biology majors (BIOL 141 and BIOL 142). They will fulfill your Natural Science requirements.

Take Abnormal Psychology (PSYC 225) early if you are interested in clinical/counseling/school psychology. Abnormal is a prerequisite for Clinical (PSYC 360) and Field Experience.

If you are interested in clinical psychology, take Clinical (PSYC 360) during the fall term (only offered in the fall) and Psychological Testing (PSYC 335) during the fall or spring term of your Junior year.

Optimally, Field Experience (PSYC 481) should be taken in the Spring term of your Junior year or the Fall term of your Senior year. If applying to graduate school, take it before you apply.

Save Personality and Individual Differences (PSYC 224) until at least your Junior year. It is a class that is offered every term. And, if you are interested in personality, then you are probably interested in clinical.

The Natural Science (NSCI) electives for fulfillment of the General Education requirements are courses designated with an (E). One NSCI elective must be from Biology, and the other may be from Biology, Chemistry, or Physics.

Introduction to Sociology is NOT a required course, but recommended. If not taken, a different course with an (S) designation (but not a Psychology course) must be taken in its place.
### Ideal Progress Grid for Psychology Majors

<table>
<thead>
<tr>
<th></th>
<th>Semester Credits</th>
<th>Cumul. Semester Credits</th>
<th>PSYC Semester Credits</th>
<th>Cumul. PSYC Credits</th>
<th>PSYC Program</th>
<th>PSYC Caveats</th>
<th>Required Math &amp; NSCI GE</th>
<th>GE/Free Elective Caveats</th>
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<tr>
<td>Freshman Fall</td>
<td>12</td>
<td>12</td>
<td>3</td>
<td>3</td>
<td>PSYC 110</td>
<td>PSYC 140</td>
<td>Math 103, 106, or 114</td>
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</tr>
<tr>
<td>Freshman Spring</td>
<td>15</td>
<td>27</td>
<td>3</td>
<td>6</td>
<td>1st core</td>
<td>Core is one course from each of four core pairs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore Fall</td>
<td>16</td>
<td>43</td>
<td>7</td>
<td>13</td>
<td>PSYC 211</td>
<td>NSCI Biol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore Spring</td>
<td>13</td>
<td>56</td>
<td>7</td>
<td>20</td>
<td>PSYC 212</td>
<td>NSCI Biol, Chem, or Phys</td>
<td>If not met, math requirement should ideally be completed by end of sophomore year</td>
<td></td>
</tr>
<tr>
<td>Junior Fall</td>
<td>16</td>
<td>72</td>
<td>7</td>
<td>27</td>
<td>PSYC 390</td>
<td>4th core elec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior Spring</td>
<td>15</td>
<td>87</td>
<td>9</td>
<td>36</td>
<td>5th PSYC core elec.</td>
<td>Complete 4th core course by this semester.</td>
<td>Ideally, NSCI sequence should be completed this semester</td>
<td></td>
</tr>
<tr>
<td>Senior Fall</td>
<td>16.5</td>
<td>103.5</td>
<td>4.5</td>
<td>40.5</td>
<td>PSYC 490</td>
<td>PSYC elec.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Spring</td>
<td>16.5</td>
<td>120</td>
<td>1.5</td>
<td>42</td>
<td>PSYC 491</td>
<td></td>
<td></td>
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</table>
VII. Planning Your Curriculum

Deciding Among Psychology Courses
The department requires that you take one of two courses in each of the Physiological Processes, Social-Developmental Processes, Learning Processes, and Individual Processes groups to provide you with a broad background in psychology. For those students considering graduate school, the department recommends additional selections from these eight courses. Here are several suggestions for selecting among courses:

- Read the course description in the catalog
- Obtain more information about the course by visiting its professor
- Ask other students about the reputation of the course
- Consider your career goals and interests up to this point
- Consult your psychology advisor

If you have a particular interest in psychology, then take an elective that will allow you to explore that interest. For example, you might want to take Industrial/Organizational Psychology if you are interested in combining a psychology and business career; Cognitive Psychology if you're interested in higher cognitive processes in humans, or such graduate programs as Cognitive Science or Neuroscience.

If you presently have no particular career interest, then take a variety of courses to help you discover where your interests lie. Refer to Section XI: Careers in Psychology for a description of the subfields of psychology.

Choosing Free Electives (30 Credits)
The 30 credits should be used first for your double majors, concentrations, and minors. If you have remaining credits, then you should use them to create a well-rounded program. Let your GE free elective choices be guided by your interests and your advisor.

A word of caution: because of duplicate material, psychology majors should not take the following courses -- Counseling Theories (HS 242), Research Methods in Human Services (HS 293), or Psychiatric Rehabilitation (HS 323).
### Example of a Master Schedule

*(Subject to Change)*

**FALL**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Code</th>
<th>Sections</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Psychology</td>
<td>Psyc 110</td>
<td>8 sections</td>
<td>Staff</td>
</tr>
<tr>
<td>Research Methods &amp; Statistical Analysis I</td>
<td>Psyc 211</td>
<td>2 sections</td>
<td>Drs. Burnham, Karpiak</td>
</tr>
<tr>
<td>Social Psychology</td>
<td>Psyc 220</td>
<td>1 section</td>
<td>Dr. Nolan</td>
</tr>
<tr>
<td>Childhood</td>
<td>Psyc 221</td>
<td>4 sections</td>
<td>Drs. Hopkins, Slotterback</td>
</tr>
<tr>
<td>Adulthood and Aging</td>
<td>Psyc 222</td>
<td>2 sections</td>
<td>Dr. Slotterback</td>
</tr>
<tr>
<td>Abnormal Psychology</td>
<td>Psyc 225</td>
<td>3 sections</td>
<td>Drs. Kemp, Schuster</td>
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<tr>
<td>Sensation &amp; Perception</td>
<td>Psyc 230</td>
<td>1 section</td>
<td>Dr. Burnham</td>
</tr>
<tr>
<td>*Behavioral Neuroscience</td>
<td>Psyc 231</td>
<td>2 sections</td>
<td>Drs. Cannon, Orr</td>
</tr>
<tr>
<td>*Behavioral Neuroscience Lab</td>
<td>Psyc 231L</td>
<td>3 sections</td>
<td>Dr. Orr</td>
</tr>
<tr>
<td>*Psychology of Language</td>
<td>Psyc 232</td>
<td>1 section</td>
<td>Dr. Warker</td>
</tr>
<tr>
<td>Cognitive Psychology</td>
<td>Psyc 234</td>
<td>2 sections</td>
<td>Dr. Warker</td>
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<tr>
<td>Exercise and Sport Psychology</td>
<td>Psyc 238</td>
<td>1 section</td>
<td>Dr. O’Malley</td>
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<tr>
<td>Psychological Testing</td>
<td>Psyc 335</td>
<td>1 section</td>
<td>Dr. Kemp</td>
</tr>
<tr>
<td>*Clinical Psychology</td>
<td>Psyc 360</td>
<td>1 section</td>
<td>Dr. Norcross</td>
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<tr>
<td>*Psychology of Diversity</td>
<td>Psyc 364</td>
<td>1 section</td>
<td>Dr. Nolan</td>
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<tr>
<td>* Career Development in Psychology</td>
<td>Psyc 390</td>
<td>4 sections</td>
<td>Dr. Norcross</td>
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<tr>
<td>Field Experience in Clinical Settings</td>
<td>Psyc 480</td>
<td>1 section</td>
<td>Dr. Norcross</td>
</tr>
<tr>
<td>*History and Literature of Psychology I</td>
<td>Psyc 490</td>
<td>2 sections</td>
<td>Drs. Burnham, O’Malley</td>
</tr>
<tr>
<td>Advanced Topic Seminar: Teaching</td>
<td>Psyc 492</td>
<td>1 section</td>
<td>Dr. Norcross</td>
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<tr>
<td>Undergraduate Research in Psychology</td>
<td>Psyc 493-494</td>
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**INTERSESSION**

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<td>Statistics in the Behavioral Sciences</td>
<td>Psyc 210</td>
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<tr>
<td>Evolutionary Psychology</td>
<td>Psyc 233</td>
<td>1 section</td>
<td>Dr. Kuhle</td>
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<td>Undergraduate Research in Psychology</td>
<td>Psyc 493-494</td>
<td>1 section</td>
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**SPRING**

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<td>Staff</td>
</tr>
<tr>
<td>Research Methods &amp; Statistical Analysis II</td>
<td>Psyc 212</td>
<td>2 section</td>
<td>Drs. Burnham, Karpiak</td>
</tr>
<tr>
<td>Social Psychology</td>
<td>Psyc 220</td>
<td>1 section</td>
<td>Dr. Nolan</td>
</tr>
<tr>
<td>Childhood</td>
<td>Psyc 221</td>
<td>3 sections</td>
<td>Drs. Hopkins, Slotterback</td>
</tr>
<tr>
<td>Adulthood and Aging</td>
<td>Psyc 222</td>
<td>2 sections</td>
<td>Drs. FitzGerald, Slotterback</td>
</tr>
<tr>
<td>Personality and Individual Differences</td>
<td>Psyc 224</td>
<td>1 section</td>
<td>Dr. Schuster</td>
</tr>
<tr>
<td>Abnormal Psychology</td>
<td>Psyc 225</td>
<td>2 sections</td>
<td>Drs. Karpiak, Kemp</td>
</tr>
<tr>
<td>Sensation and Perception</td>
<td>Psyc 230</td>
<td>1 section</td>
<td>Dr. Cannon</td>
</tr>
<tr>
<td>Evolutionary Psychology</td>
<td>Psyc 233</td>
<td>1 section</td>
<td>Dr. Kuhle</td>
</tr>
<tr>
<td>Cognitive Psychology</td>
<td>Psyc 234</td>
<td>1 section</td>
<td>Dr. Burnham</td>
</tr>
<tr>
<td>* Learning and Behavior</td>
<td>Psyc 235</td>
<td>1 section</td>
<td>Dr. Cannon</td>
</tr>
<tr>
<td>**Industrial/Organizational Psychology</td>
<td>Psyc 236</td>
<td>1 section</td>
<td>Dr. Cannon</td>
</tr>
<tr>
<td>**Psychology of Women</td>
<td>Psyc 237</td>
<td>1 section</td>
<td>Dr. Slotterback</td>
</tr>
<tr>
<td>Exercise and Sport Psychology</td>
<td>Psyc 238</td>
<td>1 section</td>
<td>Dr. O’Malley</td>
</tr>
<tr>
<td>Environmental &amp; Conservation Psychology</td>
<td>Psyc 239</td>
<td>1 section</td>
<td>Dr. Nolan</td>
</tr>
<tr>
<td>Abnormal Child Psychology</td>
<td>Psyc 325</td>
<td>1 section</td>
<td>Dr. Karpiak</td>
</tr>
<tr>
<td>*Research Methods in the Behavioral Sciences</td>
<td>Psyc 330</td>
<td>2 sections</td>
<td>Drs. Burnham, Warker</td>
</tr>
<tr>
<td>**Psychopharmacology</td>
<td>Psyc 339</td>
<td>1 section</td>
<td>Dr. Cannon</td>
</tr>
<tr>
<td>Cognitive Neuroscience</td>
<td>Psyc 350</td>
<td>1 section</td>
<td>Dr. Warker</td>
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<tr>
<td>Field Experience in Clinical Settings</td>
<td>Psyc 480</td>
<td>1 section</td>
<td>Dr. Norcross</td>
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<tr>
<td>Field Experience in Applied Psychology</td>
<td>Psyc 481</td>
<td>1 section</td>
<td>Dr. Norcross</td>
</tr>
<tr>
<td>*History and Literature of Psychology II</td>
<td>Psyc 491</td>
<td>3 sections</td>
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</tr>
<tr>
<td>Undergraduate Research in Psychology</td>
<td>Psyc 493-494</td>
<td>1 section</td>
<td>Staff</td>
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</tbody>
</table>

This sample schedule is intended for general planning purposes; some courses and individual faculty may change. In planning your program, pay particular attention to courses that are offered in only one semester a year (*) or offered every other year or not on a regular basis (**).
VIII. Undergraduate Research

Research Opportunities

The University of Scranton Psychology Department provides at least four avenues for faculty-sponsored student research. First, all students may volunteer their time and resources as a research assistant without academic credit. Second, the Faculty/Student Research Program (FSRP) is a university-wide opportunity for all undergraduates in good academic standing. Although the FSRP is offered on a non-credit basis, students receive transcript recognition for their participation. Speak to your advisor or any psychology faculty about these exciting opportunities. Third, consider taking the Honors Program and completing research therein. Fourth, Undergraduate Research in Psychology (Psyc 493-494) provides both academic credit and transcript recognition.

The psychology faculty encourages students to enroll in Undergraduate Research (Psyc 493-494) during their junior and/or senior years. Students can sign up for 1-3 credits, with a maximum of 6 credits of Undergraduate Research toward your degree. This recommendation applies to all students, independent of their particular interest areas and eventual career aspirations. Prerequisites for Undergraduate Research are Junior or Senior status, completion of the Psychological Statistics and Research Methods courses, a B average across those courses, and a psychology course most relevant to the research being conducted.

Caring for Inquiring Minds

This section is adapted from Joseph Pallodino's article, which originally appeared in the APA Monitor.

Should undergraduates be encouraged to engage in research? We, as a department, feel strongly that they should. The ancient Athenians believed that the purpose of higher education was to prepare individuals to become better citizens. Would society be better off if students understood that research is the path to knowledge? That is the "why" of undergraduate research in psychology.

Undergraduate research is a prime vehicle for reaching some of the goals of a liberal arts education, such as:

* Articulation and communication of concepts
* Comprehension of the logic governing the relationship between concepts
* Learning how to learn
* Thinking independently
* Recognizing assumptions and seeing all sides of an issue
* Holding pro-scientific, anti-authoritarian values

Few would argue with these goals as a partial statement of the desired result of a college education. These are also goals which participation in undergraduate research can influence. For those concerned about careers, we argue that our students will be better prepared if they develop a wide range of skills than if their skills are geared to a specific job existing in today's market.
We are all consumers not only of tangible products, but also of ideas. We need a scientific, questioning attitude to help us evaluate the claims that bombard us every day in the media. We need to constantly ask: "What do they know?" "How do they know it?"

Many of our questions and assumptions about human behavior can be subjected to research investigation. If students spend time with patients at the state hospital, will the patients be better for it? What should the students do and say while here? How would they describe their involvement to others? How can they decide whether the patients are better off?

Students can also be liberated from ignorance and a reliance on authorities. Psychology can be one of the most liberating of the liberal arts. Undergraduate research participation can be one of the most liberating aspects of your education. Below are some ways in which you can derive maximal benefits from conducting research.

- **Get started early.** A research orientation and a questioning attitude are instilled in a variety of courses, including Fundamentals of Psychology. But we don't try to cram research down your throats. We introduce you to simple data collection techniques, such as naturalistic observation and archival data collection. Later, you are asked to communicate your own research to the entire class. This is one of the central purposes of our Stats and Research Methods courses.

- **Prime the pump.** There are hundreds of conceivable research projects. Undergraduates may either be overwhelmed or have no idea where to start because they can think of none! We can help prime the pump by selecting research articles for you to analyze. Later, we may provide you with suggestions for potential projects. We also encourage you to consider the possibility of replicating prior research.

- **Take a new look.** We have altered some age-old thoughts about where research takes place. Though not suggesting an exodus from the lab, we try to increase the types of projects we encourage and in the locations we seek for such research. We believe students should engage in research in many locations, using different methods.

- **Present your research.** Presentation in class is a minimum requirement. Participation in research conferences is strongly encouraged. Our students have historically presented at the annual meeting of the Eastern Psychological Association (EPA). Research is not an esoteric endeavor, difficult to comprehend and difficult to accomplish. Encouraging you to engage in research does not mean that we are trying to clone Ph.D. psychologists. Research by undergraduate students is consistent with the goals of a liberal arts education.

Students who engage in research will be better equipped to deal with an expanding accumulation of information and an ever-changing world. One week after the final exam, few of you will recall the diagnostic criteria for any of the DSM-5 disorders. Few will remember whether the amygdala refers to an Italian antipasto or a part of the brain, and none will know the formula for an analysis of variance.

What, then, can we expect of you? When you are faced with a problem, we expect you will tackle the problem in a logical and methodological manner. You will draw upon the published literature, and you will use the current methods to access appropriate literature. You will analyze and synthesize the literature. Applying the literature to the problem at
hand will crystallize the path to be taken. You will communicate your findings in a
comprehensible manner, both orally and in writing.

You will, in short, have learned something about research -- and about life.

**Representative Student Research**

Below is a list of representative publications and presentations by our psychology
students from 2016 to 2018. Student names are marked by an asterisk (*).

Introduction to psychology: Course purposes, learning outcomes, and assessment practices.

To swipe left or right? Sex differences in Tinder profiles: A replication study. Poster presentation
at the annual meeting of the Human Behavior and Evolution Society, Amsterdam, Netherlands

perceptions and objectively assessed physical activity among college women. Symposium
conducted at the 2018 annual meeting of the Society of Behavioral Medicine, New Orleans, LA.

from a research-infused self-help book? Poster presented at the annual meeting of the Eastern
Psychological Association, Philadelphia, PA.

structure of attitudes toward mathematics for USA students. Presentation at the Eastern
Psychological Association, Philadelphia, PA.

relationship in TIMSS 2015: The effect of regional grouping. Presentation at the Eastern
Psychological Association, Philadelphia, PA.

learning bias for syllable positional constraints. Presentation at annual meeting of the Eastern
Psychological Association.

with autism-spectrum and ADHD tendencies in non-clinical young adults. Presentation at annual
meeting of the Eastern Psychological Association, Philadelphia, PA.

Prochaska & Norcross’s *Systems of Psychotherapy* (ninth ed.). New York: Oxford University
Press

Acute exposure to acetaminophen impairs object recognition memory in mice. Presentation at
Society for Neuroscience Abstracts, Program #424.09.

stress impairs object recognition memory in female mice. Presentation at Society for
Neuroscience Abstracts, Program #424.15.

*Moran, J. B., Kuhle, B. X., Wade, T. J., & Seid, M. S. (2017, August). To poach or not to
poach? Men are more willing to short-term poach mated women who are more attractive than

Prenatal exposure to acetaminophen affects tissue mineral density and microarchitecture of
young adult murine bone. Presentation at annual meeting of the American Society for Bone and Mineral Research, Program #MO0503.


IX. Careers in Psychology

There is great diversity within psychology. Following are brief summaries of some of the major areas in which you can concentrate your psychology studies. You should view these as opportunities, not limitations, since new areas are constantly emerging.

The last five areas of psychology described here – Family Psychology, Health Psychology, Geropsychology, Forensic Psychology, and Psychology of Men and Women – are either emerging or expanding and should provide an increasing number of jobs in the coming years.

The following table shows the number of Ph.D.s awarded in psychology by subfield.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>883</td>
<td>1,329</td>
<td>2,650</td>
</tr>
<tr>
<td>Cognitive</td>
<td>—</td>
<td>76</td>
<td>452</td>
</tr>
<tr>
<td>Counseling</td>
<td>267</td>
<td>464</td>
<td>420</td>
</tr>
<tr>
<td>Developmental</td>
<td>190</td>
<td>158</td>
<td>50</td>
</tr>
<tr>
<td>Educational</td>
<td>124</td>
<td>98</td>
<td>470</td>
</tr>
<tr>
<td>Experimental</td>
<td>357</td>
<td>143</td>
<td>110</td>
</tr>
<tr>
<td>Industrial/Organizational</td>
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<td>124</td>
<td>130</td>
</tr>
<tr>
<td>School</td>
<td>143</td>
<td>81</td>
<td>260</td>
</tr>
<tr>
<td>Social</td>
<td>271</td>
<td>165</td>
<td>40</td>
</tr>
<tr>
<td>Other or general</td>
<td>387</td>
<td>560</td>
<td>1,548</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,883</td>
<td>3,287</td>
<td>6,110</td>
</tr>
</tbody>
</table>

**Note:** Data from National Research Council and National Center for Education Statistics (selected years).

**Clinical Psychology**

Clinical psychologists assess, treat, and prevent mental disorders. Such problems may range from the normal psychological crises (e.g., rebellion in adolescence, inadequate self-esteem) to extreme conditions such as schizophrenia or major depression. Many clinical psychologists also do research. For example, they may study the characteristics of psychotherapists associated with improvements of patients the factors that contribute to anxiety.

Clinical psychologists work in both academic institutions and health care settings such as clinics, hospitals, community mental health centers, and private practices. Many clinical psychologists focus their interests on special populations such as children, minority groups, or the elderly. Others focus on treating certain types of problems, such as anxiety, eating disorders, or depression. Opportunities in clinical psychology are expanding relative to populations that have not been served well in the past: children, families, the elderly, inmates, ethnic groups, and rural dwellers. These opportunities exist in clinics, in other human service settings, and in private practices.
People with master’s and bachelor's degrees may not independently practice psychology. They may, however, work in clinical settings under the direction of a doctoral-level psychologist. In some cases this work could include testing or supervised therapy.

For further information in this area, please refer to any of the following websites:

**Community Psychology**
Community psychologists are concerned with everyday behavior in natural settings -- the home, the neighborhood, and the workplace. They seek to understand the factors that contribute to normal and abnormal behavior in these settings. They also work to promote health and prevent disorder. Whereas clinical psychologists tend to focus on individuals who show signs of disorder, most community psychologists concentrate their efforts on groups of people who are not mentally disordered (but may be at risk of becoming so) or on the population in general.

For further information in this area, please refer to www.scra27.org

**Counseling Psychology**
Counseling psychologists foster and improve human functioning across the life span by helping people solve problems, make decisions, and cope with stress. Typically, counseling psychologists work with moderately maladjusted people, individually or in groups, assessing their needs and providing a variety of therapies. They apply research-based approaches to help understand problems and develop solutions.

Counseling psychologists often use research to evaluate the effectiveness of treatments. Research methods may include structured tests, interviews, interest inventories, and observations. They also may be involved in a variety of activities, such as helping people adjust to college, consulting on physical problems that might have psychological causes, teaching graduate-level practica in counseling, or developing techniques that students can use to reduce their anxiety about taking examinations.

For further information in this area, please refer to www.div17.org

**Developmental Psychology**
Developmental psychologists study human development across the life span, from newborn to aged. Developmental psychologists are interested in the description, measurement, and explanation of age-related changes in behavior; stages of emotional development; universal traits and individual differences; and abnormal changes in development.

Many doctoral-level developmental psychologists are employed in academic settings, teaching and doing research. They often consult on programs in day-care centers, preschools, and hospitals and clinics for children. Other developmental psychologists focus their attention on problems of aging and work in programs targeted at older populations.
For further information in this area, please refer to any of the following websites: www.apadivisions.org/division-7, www.srcd.org, www.piaget.org

**Educational Psychology**

Educational psychologists study how people learn, and they design the methods and materials used to educate people of all ages. Most educational psychologists work in universities. Some conduct basic research on topics related to the learning of reading, writing, mathematics, and science. Others develop new methods of instruction including designing computer software. Still others train teachers and they investigate factors that affect teachers' performance and morale. Educational psychologists conduct research in schools and in federal, state, and local education agencies.

For further information in this area, please refer to www.apa.org/about/division/div15.aspx

**Environmental Psychology**

Environmental psychologists are concerned with how humans affect, and are affected by, environments. Topics of interest to environmental psychologists include territoriality, personal space, crowding, cognitive mapping of places, effects of urban life on city dwellers, the restorative effects of nature, and the effects of weather and noise on human behavior. An environmental psychologist, for example, might study how we can improve the design of a neighborhood to reduce stress and crime.

Conservation psychologists work in a related area concerned specifically with the human impact on the environment. Conservation psychologists conduct research designed to understand and solve environmental problems, such as global warming. For example, a conservation psychologist might investigate the effectiveness of a social norms marketing campaign to reduce home energy consumption.

Environmental and conservation psychologists can be found in a wide array of academic and nonacademic settings. Consultants and academics typically have a doctoral degree, but environmental psychologists can also be employed with a master’s degree in federal agencies, urban and regional planning agencies, and environmental design firms.

For an overview of Conservation psychology, please visit www.apadivisions.org/division-34/interests/conservation.

**Evolutionary Psychology**

Evolutionary psychologists (EPs) study human nature. EPs are interested in discovering and understanding the information-processing mechanisms that evolved to solve ancestral adaptive problems. They believe that knowledge of psychology can be gained by considering how our thoughts, feelings, and behaviors increased our ancestors’ reproduction. EPs use a multitude of methods to explore a broad range of topics including eating, language, gossip, mating, parenting, kinship, cooperation, altruism, aggression, warfare, and conflict between the sexes.

Evolutionary psychologists usually have Ph.D.s and work in academic settings where they teach, supervise undergraduate or graduate research, and conduct their own research. For additional information (including a list of graduate programs), see www.hbes.com
Exercise and Sport Psychology

Exercise and sport psychology can be defined as the “study of the psychological aspects of sport”; however, sport psychology is not limited to sports and may include any type of physical activity or exercise. Thus, sport psychology may address any aspect of athletes’ or performers’ lives to assist them in their performance and life endeavors. Sport psychologists examine topics such as the ways an athlete can use visualization techniques and ways sports teams can cooperate to work more effectively together.

Like other psychologists, some sport psychologists conduct research in academic, clinical, government, and business settings. Others help individuals and teams improve their athletic performance and training coaches to help them become more productive. For further information in this area, please refer to www.apa47.org

Experimental Psychology

"Experimental psychologist" is a general title applied to a diverse group of psychologists who conduct research on and often teach basic behavioral processes. These processes include: learning, sensation, perception, motivation, memory, language, thinking, and the physiological processes underlying behaviors such as eating, reading, and problem solving. Experimental psychologists study the processes by which humans take in, store, retrieve, express, and apply knowledge.

Most experimental psychologists work in academic settings, teaching courses and supervising students’ research in addition to conducting their own research. Experimental psychologists are also employed by research institutions, business, industry, and government. A research-oriented doctoral degree is usually needed for advancement and mobility in experimental psychology.


Family Psychology

Family psychologists are practitioners, researchers, and educators concerned with the prevention of family conflict, the treatment of couple/family problems, and the maintenance of family functioning. As service providers, they often design and conduct programs for marital enrichment, pre-marital preparation, and improved parent-child relations. They also provide treatment for marital conflicts and problems that affect whole families. As researchers, they seek to identify environmental and personal factors that are associated with improved family functioning.

Doctoral programs in family psychology are just beginning to appear. Traditionally, most family psychologists have earned their degree in clinical or counseling psychology. Family psychologists are often employed in medical schools, hospitals, private practices, family institutes and community agencies.

For further information in this area, please refer to www.apadivisions.org/division-43/index.aspx
Forensic Psychology

“Forensic psychology” is the term given to the applied and clinical facets of psychology and law. Forensic psychologists might help a judge decide which parent should have custody of the children or evaluate the victim of an accident to determine if he or she sustained psychological or neurological damage. In criminal cases, forensic psychologists might evaluate a defendant's mental competence to stand trial.

Some specialists in this field have doctoral degrees in both psychology and law. Others were trained in a clinical psychology program and chose courses, research topics, and practical experiences to fit their interest in psychology and law. Jobs for people with doctoral degrees are available in psychology departments, law schools, research organizations, law enforcement agencies, courts, and correctional settings. Some forensic psychologists work in private practice.

For further information in this area, please refer to www.apadivisions.org/division-41/index.aspx

Geropsychology

Researchers in the psychology of aging (geropsychology) study the factors associated with adult development and aging. For example, they may investigate how the brain and the nervous system change as humans age and what effects those changes have on behavior or how a person's style of coping with problems varies with age.

Many people interested in the psychology of aging are trained in a more traditional graduate program in psychology, such as experimental, clinical, developmental, or social. While they are enrolled in such a program, they become geropsychologists by focusing their research, coursework, and practical experiences on adult development and aging. Geropsychologists are finding jobs in academic settings, research centers, industry, health care organizations, and agencies serving the elderly.

For further information in this area, please refer to apadiv20.phhp.ufl.edu

Health Psychology

Clinical health psychologists are researchers and practitioners concerned with psychology's contribution to the promotion and the maintenance of good health, and the prevention and the treatment of illness. As clinicians, they may design and conduct programs to help individuals stop smoking, lose weight, manage stress, or stay physically fit. As researchers, they seek to identify practices that are associated with health and illness. For example, they might study the effects of relocation on elderly persons' physical well-being. In public service roles, they study and work to improve government policies and systems for health care.

For further information in this area, please refer to any of the following websites: www.health-psych.org, www.sbm.org

Industrial/Organizational (I/O) Psychology

Industrial/organizational psychologists are concerned with the relation between people and work. Their interests include organizational structure and organizational change;
workers' productivity and job satisfaction; selection, placement, and development of personnel; and the interaction between humans and machines. Their responsibilities on the job include research, development, and problem solving. I/O psychologists work in businesses, industries, governments, and universities. Some may be self-employed as consultants or work for management consulting firms.

Jobs for industrial/organizational psychologists are available at both the master's and the doctoral level. Opportunities for those with master's degrees tend to be concentrated in business, industry, and government settings; doctoral-level psychologists also work in academic settings and independent consulting work.

For further information in this area, please refer to any of the following websites: www.siop.org, www.apa.org/about/division/div14.aspx, www.hfes.org

Neuropsychology
Neuropsychologists investigate the relation between physical systems and behavior. Topics they study include the relation of specific biochemical mechanisms in the brain to behavior, the relation of brain structure to function, and the chemical and physical changes that occur in the body when we experience different emotions.

Clinical neuropsychologists work in the neurology, neurosurgery, psychiatric, and pediatric units of hospitals, and in clinics. They also work in academic settings where they conduct research and train others. Most positions in neuropsychology are at the doctoral level, and many require postdoctoral training.


Psychology of Women and Men
The psychology of women and men is the study of factors affecting gender development and behavior. The field includes the study of stereotypes, the relation of hormones to behavior, and the development of gender roles, gender identity, and sexuality.

Psychologists focusing on the psychology of gender are found in academic settings and a variety of clinical settings. Current research topics include reactions to rape, factors that promote managerial success, and factors that discourage talented girls from obtaining advanced mathematics training. Clinicians whose area of concentration is the psychology of women may practice feminist therapy with women and girls. Clinicians whose area of concentration is the psychology of men focus on psychotherapy with men.

For further information in this area, please refer to any of the following websites: www.apa.org/about/division/div35.html, www.apa.org/about/division/div51.aspx

Psychometrics and Quantitative Psychology
Psychometric and quantitative psychologists are concerned with the methods used in acquiring and applying psychological knowledge. A psychometrician may revise old intelligence or personality tests or devise new ones. Other quantitative psychologists
might assist a researcher in psychology or in another field design to interpret the results of an experiment. To accomplish these tasks, they may design new techniques of analyzing information.

Psychometricians and quantitative psychologists typically are well trained in mathematics, statistics, computer programming, and technology. Doctoral-level psychometricians and quantitative psychologists are employed mainly by universities and colleges, testing companies, private research firms, and government agencies. Those with master's degrees often work for testing companies and private research firms.

For further information in this area, please refer to www.apa.org/about/division/div5.aspx

**School Psychology**

School psychologists help educators and others promote the intellectual, social, and emotional development of children. They are also involved in creating environments that facilitate learning and mental health. They evaluate and plan programs for children with special needs or disruptive behavior in the classroom. They sometimes engage in program development and staff consultation to prevent problems. They sometimes provide on-the-job training for teachers in classroom management, consult with parents on ways to support a child's efforts in school, and consult with school administrators on psychological and educational issues.

To be employed in the public schools, school psychologists must have completed a state-approved master’s program and be certified by the state. Certification as a school psychologist can usually be obtained after 60 hours of graduate work and a one-year supervised internship.

For further information in this area, please refer to www.apa.org/about/division/div16.aspx

**Social Psychology**

Social psychologists study how people interact with each other and how they are affected by their social environments. Topics of interest to social psychologists include the formation of attitudes and attitude change, attractions between people such as friendship and love, prejudice, group dynamics, and violence and aggression. Social psychologists might, for example, study how attitudes toward the elderly influence the elderly person's self-concept, or they might investigate how unwritten rules of behavior develop in groups and how those rules regulate the conduct of group members.

Social psychologists can be found in a wide variety of academic settings and, increasingly, in many nonacademic settings. For example, more social psychologists than before now work in advertising agencies, corporations, and architectural and engineering firms as researchers, consultants, and personnel managers.

For further information in this area, please refer to any of the following websites: www.spsp.org, www.spssi.org, www.sesp.org
A Word About Salary Expectations

Psychologists earn a wide range of salaries, depending more on the nature of their job than on their particular specialty. For example, a person with a B.S. in psychology working as a Mental Health Technician might make $25,000 a year, while an academic psychologist at a university might make $60,000-$150,000. Similarly, a psychologist working in research at a drug company or a management position will probably make more than one who is a university professor. A doctoral-level clinical psychologist in full-time independent practice will average $125,000 a year. More experienced psychologists typically earn more than the average, of course.

Master-level mental health professionals predictably earn less than doctoral-level clinical or counseling psychologists. School psychologists with a masters degree average $75,000 per year. Masters-level clinicians, such as counselors and social workers, in agencies will earn between $35,000 and $50,000 and those in private practice closer to $60,000.

High-paying jobs in psychology per se are rare, if not impossible, without a graduate degree. In general, people with graduate degrees earn more if they are employed by industry, the federal government, or in private practice. Jobs in public agencies and universities (with the exception of administrative positions) typically have lower, although still quite adequate, pay scales.

### 2017 Average Salaries for Psychologists

<table>
<thead>
<tr>
<th>Type of Position</th>
<th>Doctoral level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Position – Full Professor</td>
<td>$120,000</td>
</tr>
<tr>
<td>Faculty Position – Assistant Professor</td>
<td>$60,000</td>
</tr>
<tr>
<td>Educational Administration</td>
<td>$125,000</td>
</tr>
<tr>
<td>Private Practice</td>
<td>$125,000</td>
</tr>
<tr>
<td>Research Positions</td>
<td>$60,000</td>
</tr>
<tr>
<td>Management Positions</td>
<td>$136,000</td>
</tr>
<tr>
<td>School Psychology</td>
<td>$85,000</td>
</tr>
<tr>
<td>I/O Psychology</td>
<td>$125,000</td>
</tr>
</tbody>
</table>

**Source:** 2017 National Survey of College Graduates, National Science Foundation
X. Psychology and the Helping Professions

The fields of clinical, counseling, and school psychology involve working with people in a helping relationship. There are six core mental health disciplines, of which psychology is one. The other five are psychiatry, clinical social work, psychiatric nursing, counseling, and marital/family therapy.

**Psychologist**  
Doctorate (Ph.D., Psy.D.) in clinical, counseling, or school psychology followed by a one-year internship. Psychologists are the only mental health professionals who perform psychological testing.

**Psychiatrist**  
Medical doctor (M.D., D.O.) who has completed a 3-year residency in psychiatry after completing medical school.

**Psychiatric Nurse**  
Baccalaureate (B.S.N.) and master's (M.S.N.) in nursing with a focused interest in mental health.

**Social Worker**  
Master's degree in social work (M.S.W.) followed by several years of supervised clinical experience (leading to state licensure).

**Professional Counselor**  
Master's degree (MA, MS) in counseling followed by several years of supervised experience leading to licensure.

**Marital/Family Therapist**  
Master’s degree followed by supervised experience.

Note that the term “psychotherapist” is not a legally protected or regulated term; anyone can call themselves a psychotherapist.

Confusion abounds with regard to the best preparation for a career in mental health. Survey research and our graduates' experiences attest to the value of statistics and research methods in addition to clinical experience. Consequently, students oriented toward graduate training in any of the helping professions are well-served by our psychology curriculum.

A related misconception concerns required training for certain clinical specialties. A doctorate in clinical or counseling psychology is required prior to specializing in clinical neuropsychology, clinical child psychology, or clinical health psychology. Accordingly, the most appropriate major for individuals with these interests is psychology.
XI. Careers with a Bachelor's Degree

About 50% of our psychology majors at the baccalaureate level will seek a full-time job immediately after they graduate. The good news is that the psychology majors entering the labor force one year after graduation, 96% were employed.

Psychology is the third or fourth most popular undergraduate major. In 2017, about 120,000 college seniors graduated with a degree in psychology, but many were not necessarily interested in a career as a psychologist. In fact, the National Center for Education Statistics reports that 20% of psychology baccalaureate recipients work in social services or public affairs, 21% in administrative support, 14% in education, 10% in business, 10% in sales, 9% in service personnel, and 5% in health professions. An additional 3% find themselves working in computer science and an equal percentage in biological sciences.

The career of "psychologist" is not open to the BS psychology graduate. American psychology has clearly made the decision that the doctorate – and the master's degree in school psychology – is the entry-level qualification. Therefore, we cannot honestly speak of the baccalaureate in psychology as preparation for a career as a licensed psychologist. Similarly, a baccalaureate degree in political science does not qualify an individual to practice law, and a baccalaureate in biology does not make one a physician.

All this is to say that the study of psychology at the bachelor’s level is fine preparation for many other professions. Indeed, a liberal arts education with a psychology major enhances those skills critical to job success. These are:

- Critical thinking
- Oral communication
- Interpersonal skills
- Writing ability
- Problem-solving skills

Researchers contacted private employers and found a strong positive response to employees with human relations skills coupled with research skills. Other national research indicates that employers give the highest ratings to individuals with strengths in writing proposals and reports, applying knowledge to identify and solve problems, conducting interviews, and performing statistical analyses.

The argument that a psychology degree is good preparation for many careers is supported by a report from the National Science Foundation on bachelor's degree recipients in psychology. The work functions of these graduates covered a broad range: 30% in management or administration, 28% in sales and/or professional services, 16% in teaching, and 12% in production or inspection.

Looking specifically at college graduates' prospects in business, two major studies examined the relation between college experiences and management potential. Of all the educational experiences considered, undergraduate major was the strongest predictor of managerial performance and progress. Psychology majors fell within the category of
social science. This group had the best overall record, with particular strengths in interpersonal abilities, verbal skills, and motivation to advance.

The one general weakness of social science majors was in quantitative ability. Psychology, however, is an exception to this and provides an excellent quantitative background. This attests to the value of the Department's policy of requiring competence in math, statistics, and research methods.

**What Business Employers are Looking for**

Eison (1988) had 362 representatives of business and industry who were actively interviewing college students complete a questionnaire on 15 factors pertaining to hiring psychology graduates. The 5 most important were: personality of students, grades in major courses, nature of non-college jobs held, overall grade point average, and awards/honors/publications.

Similarly, employers participating in a survey conducted by the American Management Society were asked to select from among nine traits the most important characteristic of candidates applying for an entry-level college graduate position. The percent rating each item as most significant was as follows (from Pilla, 1984):

- Personality/motivation: 35%
- Education background: 20%
- Communication skills: 16%
- Scholastic performance: 12%
- Intelligence: 5%
- Work-related experience: 2%

Implications for job-seekers thus include: practicing your interviewing skills; polishing your communication style; maintaining a positive grade point average; and seeking career-relevant work experiences.

Overall, psychology graduates are entering all kinds of occupations. The bachelor's degree in psychology affords flexible employment. You are obviously not limited to positions in mental and psychological services. Your degree can lead to a variety of worthwhile and exciting careers. It is up to you to decide the direction to take.

**A Pletora of Job Opportunities**

Students often think only of psychiatric hospitals as employment sites for those interested in work related to psychology. Listed below are many types of agencies and settings. In all of these, persons with bachelor's degrees have found interesting and challenging positions which utilize their knowledge of psychology.

1. Community Relations Officer: works either for business or government in promoting good relations with the local community.
2. Affirmative Action Officer: works for recruitment and equal opportunities for minorities; employed by business, industries, schools and government.
3. Management Trainee: plans and supervises operations of a business concern.
Personnel Administrator: works with employee relations, selection, promotions, etc.

Advertising Copywriter: researches audience and media.

Media Buyer: researches products and audiences to select effective media for advertising.

Health Educator: gives public information about health and disease.

Psychological Technician: administers routine tests, helps with patients under supervision of a psychologist.

Director of Volunteer Service: recruits, supervises, trains and evaluates volunteers.

Public Statistician: collects and interprets data on health and disease.

Customs Inspector: serves at international borders in investigations and inquiries.

Probation/Parole Officer: persons with psychology backgrounds are often preferred for such positions, especially with adolescent parolees.

Technical Writer: researches and writes material dealing with social science for magazines, newspapers, and journals.

Sales Representative: publishers of psychological books often seek out psychology majors.

Opinion Survey Researcher: does opinion polls and interprets results.

Daycare Center Supervisor: supervises activities of preschool children.

Research Assistant: assists in the collection and analysis of data.

Laboratory Assistant: working with animal behavior research, especially primate laboratories.

Scientific Instrument Salesperson: opportunities in sales and development for companies specializing in psychology apparatus.

We have not listed the numerous kinds of "clinical" positions available to many students with a bachelor's degree in a variety of social service and mental health agencies.

The University of Scranton's Center for Career Development conducts an annual survey of post-graduation activities. Following is a sampling of job titles reported by our psychology graduates with bachelor degrees in recent years.

ABA Counselor
ABA Teaching Aid
Administrative Case Manager
Advertising Sales Assistant
Assistant Teacher
Behavior Support Assistant
Behavioral Technician
Care Coordinator
Case Manager
Clinical Research Assistant
Counselor Advocate
Crisis Clinician
Direct Care Counselor
Direct Support Professional
Drug/Alcohol Treatment Specialist
Educational Treatment Counselor
Employment Specialist
Ensign – United States Navy

Head Pre-School Teacher
Healthcare Representative
Intake Coordinator
Intensive Case Manager
Investigator
IT Recruiter
Language and Culture Assistant
Life Skills Trainer
Mental Health Counselor
Milieu Counselor
Nursing Assistant
Nutrition Counselor
Operations Analyst
Paraeducator
Para Therapist
Patient Services Coordinator
Personal Care Assistant
Pharmacy Technician
<table>
<thead>
<tr>
<th>Professional Role</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Grade Teacher</td>
<td>Play Therapist</td>
</tr>
<tr>
<td>Foreign Teacher</td>
<td>Preschool Teacher</td>
</tr>
<tr>
<td>Probation Officer</td>
<td>Special Education Development</td>
</tr>
<tr>
<td>Project Coordinator</td>
<td>Substitute Teacher</td>
</tr>
<tr>
<td>Recreation Aide</td>
<td>Support Staff</td>
</tr>
<tr>
<td>Regional Director</td>
<td>Teacher</td>
</tr>
<tr>
<td>Researcher</td>
<td>Teaching Assistant</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>Headhunter for Technology</td>
</tr>
<tr>
<td>Research Program Assistant</td>
<td>Therapeutic Staff</td>
</tr>
<tr>
<td>School Behav. Health Worker</td>
<td>Transportation Security Officer</td>
</tr>
<tr>
<td>Second Lieutenant -- US Air Force</td>
<td>TSS for Autism</td>
</tr>
<tr>
<td>Second Lieutenant -- US Army</td>
<td>U.S. Army Reserves</td>
</tr>
<tr>
<td>Secret Service</td>
<td>Volunteer for Jesuit Volunteer Corps</td>
</tr>
<tr>
<td>Sessions Assistant</td>
<td>Volunteer for Mercy Volunteer Corps</td>
</tr>
<tr>
<td>Special Education Teacher</td>
<td>Youth Counselor</td>
</tr>
</tbody>
</table>
XII. Graduate School In Psychology

Before discussing such topics as Applying to Graduate School, it might prove helpful to give a brief summary of just what graduate school is. Graduate school is post-graduate education, taking an average of 2 years for the master's degree and 4-5 years for the Ph.D. or Psy.D. (“doctoral”) degree (5-6 years in clinical or counseling psychology).

There are a number of significant ways in which graduate school differs from your undergraduate experience. First, the credit-hour load will be lighter in graduate school. Nine or twelve credits, rather than 15-18, per semester is a typical graduate load. You can, however, presume that each course will demand a fair amount of time. Second, you will take psychology courses almost exclusively.

Third, your professors will give you more freedom, and thus increased responsibility, regarding the entire learning process -- ranging from completion of assigned work (no one will nag you!), selection of courses, and class attendance. In a phrase, you will be expected to develop into mature, independent scholars.

Fourth, class sizes will be smaller. Some seminar courses will have as few as five students, in which each is expected to master a special topic and "teach" his or her fellow students. In lecture courses, the professor will often expect you to master the textbook, while he or she talks about related material. In addition, scholarly work in the library is often expected. Finally, you will probably experience a closer bond between yourself, fellow students, and your professors due to the preceding points and also to the smaller student/faculty ratio. Many people find that the tight psychological and social bonds formed in graduate school remain throughout their lives.

Must I Go to Graduate School?

No. Graduate school in psychology is not the only option when one receives a bachelor's degree in psychology. Many students have found rewarding work with a B.S. or some advanced study in a related area outside psychology. See Section XI for additional careers with a bachelor's degree.

Should I Go to Graduate School?

There is no universally correct answer to this question. Each person must decide for him or herself. Here are several questions to consider when making your decision:

Do you have aspirations of a career which will allow you both vertical mobility (i.e., promotional and salary ladders) and horizontal mobility (i.e., the opportunity for one to switch from one area to another with the same career)? People with a doctorate have more career choices open to them than masters' level psychologists in the same area. They start at higher positions than those without advanced training.

Do you want a career with a higher income? People with doctorates are usually hired at a higher salary than other people.
Are you satisfied with the knowledge of psychology you have now? A B.S. gives you a foundation of knowledge. To gain further expertise and sharpen your talents, graduate school is the place to go. Of course, the benefits of an advanced degree only come after more effort and application of yourself.

How Should I Best Prepare for Graduate School?

The obvious answer is to perform well in all your academic pursuits. Less obvious but equally important is to prepare early for your graduate school career. In fact, a leading advice book on how to apply to graduate school in psychology is subtitled "not for seniors only!"

The two most highly rated objective criteria for admission into graduate school are your grade point average (GPA) and your scores on the Graduate Record Examination (GRE: a glorified SAT). The implications are thus clear: maintain a high GPA and prepare thoroughly for the GREs.

The following table reflects what graduate programs look for in undergraduate psychology coursework. These percentages are underestimates because they do not include those schools that simply responded that an undergraduate degree in psychology was required for admission to their program. The message here is: get a strong background in psychology!

<table>
<thead>
<tr>
<th>Course</th>
<th>Required</th>
<th>Preferred</th>
<th>Required or preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>56%</td>
<td>29%</td>
<td>85%</td>
</tr>
<tr>
<td>Research Methods</td>
<td>40%</td>
<td>26%</td>
<td>66%</td>
</tr>
<tr>
<td>Childhood/Developmental</td>
<td>11%</td>
<td>24%</td>
<td>35%</td>
</tr>
<tr>
<td>Abnormal/Psychopathology</td>
<td>16%</td>
<td>17%</td>
<td>33%</td>
</tr>
<tr>
<td>Learning/Conditioning</td>
<td>9%</td>
<td>20%</td>
<td>29%</td>
</tr>
<tr>
<td>Personality</td>
<td>12%</td>
<td>16%</td>
<td>28%</td>
</tr>
<tr>
<td>Physiological/Biopsychology</td>
<td>6%</td>
<td>19%</td>
<td>25%</td>
</tr>
<tr>
<td>Social</td>
<td>5%</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>Psych Testing</td>
<td>10%</td>
<td>8%</td>
<td>18%</td>
</tr>
<tr>
<td>History &amp; Systems</td>
<td>5%</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>Cognitive</td>
<td>4%</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td>Lab course</td>
<td>8%</td>
<td>4%</td>
<td>12%</td>
</tr>
<tr>
<td>Sensation &amp; Perception</td>
<td>3%</td>
<td>8%</td>
<td>11%</td>
</tr>
</tbody>
</table>


Research has investigated the importance accorded to the multiple criteria used for admissions decisions. This information is summarized in the following table. The numbers are average ratings of the criterion's importance for admission into graduate programs where 3 = high importance, 2 = moderate importance, and 1 = low importance.
Importance of Criteria in Admissions Decisions

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Master's</th>
<th></th>
<th>Doctoral</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Letters of recommendation</td>
<td>2.74</td>
<td>.49</td>
<td>2.82</td>
<td>.42</td>
</tr>
<tr>
<td>Personal statement/goals</td>
<td>2.63</td>
<td>.55</td>
<td>2.81</td>
<td>.41</td>
</tr>
<tr>
<td>GPA</td>
<td>2.75</td>
<td>.43</td>
<td>2.74</td>
<td>.45</td>
</tr>
<tr>
<td>Interview</td>
<td>2.30</td>
<td>.76</td>
<td>2.62</td>
<td>.60</td>
</tr>
<tr>
<td>Research experience</td>
<td>2.04</td>
<td>.74</td>
<td>2.54</td>
<td>.65</td>
</tr>
<tr>
<td>GRE scores</td>
<td>2.36</td>
<td>.66</td>
<td>2.50</td>
<td>.55</td>
</tr>
<tr>
<td>Clinically related public service</td>
<td>1.94</td>
<td>.70</td>
<td>1.91</td>
<td>.69</td>
</tr>
<tr>
<td>Work experience</td>
<td>1.91</td>
<td>.65</td>
<td>1.87</td>
<td>.68</td>
</tr>
<tr>
<td>Extracurricular activity</td>
<td>1.46</td>
<td>.54</td>
<td>1.41</td>
<td>.55</td>
</tr>
</tbody>
</table>

Means are calculated where 1 = low importance, 2 = medium importance, and 3 = high importance.


In general, letters of recommendation and research activity are accorded high importance; work experience and clinical service are given medium importance; extracurricular activity are accorded low importance. Although research experience is weighted heavily by master's programs, doctoral programs rate it even more heavily in their admission decisions. Conversely, master's programs weigh service more heavily than doctoral programs. Field experience is accorded medium weight but extracurricular activities, such as Psi Chi membership, are given little weight.

**Do I Need Letters of Recommendation?**

Yes, usually a minimum of three recommendations are required. Students have the option to waive or not waive the right to see the recommendation. Applied research and consensus of opinion indicate that a more accurate evaluation is given when a student waives his/her right of access.

Also, a personal statement and a curriculum vitae (résumé) are usually required. It gives one the chance to distinguish oneself from the other applicants; in a sense it is an opportunity to "sell oneself."

**What Sort of Credentials Do I Need for Graduate School?**

The following tables provide some information for both doctoral and master's programs.
### Median Program Acceptance Rates in Psychology

(% of students who apply and are accepted to a particular program)

<table>
<thead>
<tr>
<th>Area</th>
<th>Master’s</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Psychology</td>
<td>37%</td>
<td>(table)</td>
</tr>
<tr>
<td>Clinical Neuropsychology</td>
<td>---</td>
<td>26%</td>
</tr>
<tr>
<td>Cognitive Psychology</td>
<td>40%</td>
<td>16%</td>
</tr>
<tr>
<td>Community Psychology</td>
<td>61%</td>
<td>24%</td>
</tr>
<tr>
<td>Counseling Psychology</td>
<td>63%</td>
<td>12%</td>
</tr>
<tr>
<td>Developmental Psychology</td>
<td>44%</td>
<td>20%</td>
</tr>
<tr>
<td>Educational Psychology</td>
<td>57%</td>
<td>48%</td>
</tr>
<tr>
<td>Experimental Psychology</td>
<td>39%</td>
<td>15%</td>
</tr>
<tr>
<td>Health Psychology</td>
<td>41%</td>
<td>16%</td>
</tr>
<tr>
<td>Industrial/Organizational Psychology</td>
<td>52%</td>
<td>27%</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>32%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>15%</td>
</tr>
<tr>
<td>Quantitative Psychology</td>
<td>78%</td>
<td>36%</td>
</tr>
<tr>
<td>School Psychology</td>
<td>34%</td>
<td>31%</td>
</tr>
<tr>
<td>Social &amp; Personality Psychology</td>
<td>39%</td>
<td>12%</td>
</tr>
</tbody>
</table>


These are median acceptance rates for individual graduate programs, *not* the acceptance rate for the entire applicant pool in any given year. For example, an average of 16% of the applicants to any one cognitive psychology doctoral program will be accepted to that particular program, but approximately 40% of the entire applicant pool will be accepted to some program.

### Average Acceptance Rates for APA-Accredited Clinical Psychology Programs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of applications</td>
<td>227</td>
<td>163</td>
<td>155</td>
<td>160</td>
</tr>
<tr>
<td>Number of acceptances</td>
<td>108</td>
<td>58</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Acceptance rate</td>
<td>50%</td>
<td>40%</td>
<td>16%</td>
<td>14%</td>
</tr>
</tbody>
</table>

**Source:** Data from Norcross, Ellis, & Saytette (2010).
### Average GPAs and GREs of First-Year Graduate Students in Psychology (by Type of Department)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Master's Departments</th>
<th>Doctoral Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Mean</td>
<td>Actual Mean</td>
</tr>
<tr>
<td>Graduate Record Examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal</td>
<td>150</td>
<td>153</td>
</tr>
<tr>
<td>Quantitative</td>
<td>141</td>
<td>146</td>
</tr>
<tr>
<td>Verbal + Quantitative</td>
<td>290</td>
<td>300</td>
</tr>
<tr>
<td>GRE Psychology Subject Test</td>
<td>495</td>
<td>577</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>2.92</td>
<td>3.37</td>
</tr>
<tr>
<td>Psychology</td>
<td>3.05</td>
<td>3.48</td>
</tr>
</tbody>
</table>


### Our recent Psychology graduates are attending graduate school at:

- Adelphi University
  - MS Clinical Mental Health Counseling
  - MS Social Work
- Alfred University
  - MS School Psychology
- Bryn Mawr College
  - MS Social Work
- Binghamton University
  - MSW Social Work
  - PhD Clinical Psychology
  - PhD Cognitive Psychology
- Bucknell University
  - MS Psychology
- Caldwell University
  - MA Mental Health Counseling
- Chestnut Hill College
  - MA Clinical Psychology
- Columbia University
  - EdM School Psychology
- Fordham University
  - MA School Psychology
  - MS Clinical Research Methodology
- Georgian Court University
  - MS School Psychology
- Hunter College
  - MS Mental Health Counseling
- Iowa University
  - PhD Cognitive Psychology
- LaSalle University
  - Pre-Speech Language Pathology
- Lehigh University
  - MS School Psychology
- Loyola of Maryland
  - MS Psychology
- Marymount University
  - MS Clinical Mental Health Counseling
- Marywood University
  - MA Mental Health Counseling
  - PsyD Clinical Psychology
- Memphis University
  - PhD Clinical Psychology
<table>
<thead>
<tr>
<th>Institution</th>
<th>Programs Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montclair State University</td>
<td>MS I/O Psychology</td>
</tr>
<tr>
<td></td>
<td>MS Clinical psychology</td>
</tr>
<tr>
<td>New York Institute of Technology</td>
<td>MA School Counseling</td>
</tr>
<tr>
<td>Northampton Community College</td>
<td>Funeral Directing</td>
</tr>
<tr>
<td>Penn State University</td>
<td>MS Communication Sciences</td>
</tr>
<tr>
<td></td>
<td>MA Counseling</td>
</tr>
<tr>
<td>Philadelphia College of Osteopathic Medicine</td>
<td>MS Mental Health Counseling</td>
</tr>
<tr>
<td></td>
<td>MS School Psychology</td>
</tr>
<tr>
<td></td>
<td>MS Physician Assistant</td>
</tr>
<tr>
<td>Queens College</td>
<td>MS School Psychology</td>
</tr>
<tr>
<td>Rutgers University</td>
<td>MS Clinical Social Work</td>
</tr>
<tr>
<td></td>
<td>PhD Psychology</td>
</tr>
<tr>
<td>Sacred Heart University</td>
<td>MS Occupational Therapy</td>
</tr>
<tr>
<td></td>
<td>MS Speech Language Pathology</td>
</tr>
<tr>
<td>Silberman School of Social Work</td>
<td>MSW Social Work</td>
</tr>
<tr>
<td>Spalding University</td>
<td>PsyD Psychology</td>
</tr>
<tr>
<td>Teachers College, Columbia</td>
<td>MS School Psychology</td>
</tr>
<tr>
<td>Temple University</td>
<td>MS Social Work</td>
</tr>
<tr>
<td>Tulane University</td>
<td>PhD Evolutionary Psychology</td>
</tr>
<tr>
<td>University of Baltimore</td>
<td>MS Industrial Organizational</td>
</tr>
<tr>
<td>University of Minnesota</td>
<td>PhD School Psychology</td>
</tr>
<tr>
<td>University of Limerick, Ireland</td>
<td>MS Work and Organizational Psychology</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>MS Criminology</td>
</tr>
<tr>
<td>University of Scranton</td>
<td>MA Theology</td>
</tr>
<tr>
<td></td>
<td>MS Secondary Education</td>
</tr>
<tr>
<td></td>
<td>MS Clinical Mental Health Counseling</td>
</tr>
<tr>
<td>University of Southern California</td>
<td>MA Occupational Therapy</td>
</tr>
<tr>
<td>University of West Florida</td>
<td>MA Psychology</td>
</tr>
<tr>
<td>Urban Teacher Center</td>
<td>MEd Secondary Education</td>
</tr>
<tr>
<td>Villanova</td>
<td>MS Psychology</td>
</tr>
<tr>
<td>Wagner College</td>
<td>MSN Nursing</td>
</tr>
<tr>
<td>West Chester University</td>
<td>MA Industrial/Organizational Psychology</td>
</tr>
<tr>
<td></td>
<td>MA School Psychology</td>
</tr>
<tr>
<td></td>
<td>MS Social Work</td>
</tr>
<tr>
<td>William Paterson University</td>
<td>MEd Professional Counseling</td>
</tr>
<tr>
<td></td>
<td>DPT Physical Therapy</td>
</tr>
</tbody>
</table>

**Modal Timeline**

This section outlines certain steps that should be taken in the respective years to aid one in gaining admission to graduate school and possibly increase the chance of gaining a fellowship or assistantship. This timeline is reproduced from Norcross & Sayette (2016).

This timeline pertains to applications for *doctoral* programs in psychology with deadlines between December 1 and February 1. By contrast, the process of applying to master’s programs typically occurs three months later with deadlines between February 1 and April 1. Please adapt this modal timeline to your specific circumstances.
Freshman and Sophomore Years

1. Take the core psychology courses -- statistics, research methods, abnormal, cognitive, social.
2. Find out about faculty interests and research.
3. Make preliminary contact with faculty members whose research interests you.
4. Explore volunteer opportunities.
5. Join psychology student organizations and become an active member.
6. Attend departmental colloquia and social gatherings.
7. Learn to use library and electronic resources, such as scholarly journals and PsycLit.
8. Consider participating in your university’s Honors program, if you qualify.
9. Begin a career folder, and place activities, awards, and other valuable reminders in it.
10. Discuss your career interests with faculty members and other mentors.

Junior Year

1. Take advanced psychology courses, for example, biopsychology and psychological testing.
2. Volunteer for research with faculty and research potential projects.
3. Enroll in professional organizations, for example, student affiliate of American Psychological Association or American Psychological Society.
4. Apply for membership in your local Psi Chi chapter.
5. Visit Career Development and determine how the staff can assist you.
6. Draft a curriculum vitae or résumé to determine your strengths and weaknesses.
7. Attend a state or regional psychology convention.
8. Peruse grad school bulletins online to acquaint yourself with typical requirements.
9. Become comfortable with leading Web sites on graduate school admissions.
10. Access the GRE bulletin and information online.
13. Begin preparation for the GRE by purchasing a study guide, attending a preparation course, and taking practice tests.
12. Consider serving as an officer in one of the student organizations on campus.
13. Meet with your advisor before summer to review your plan for graduate applications.

Application Year

June–August

1. Continue to acquire research competencies and practical experiences.
2. Surf the Web and begin to gather information from program websites.
3. Begin to narrow down potential schools to 20-30.
4. Prepare intensively for the GREs.
5. Consider taking the GRE General Test if you are prepared; this will afford ample time to retake them in the fall if necessary.
6. Investigate financial aid opportunities for graduate students.
7. Set aside money for the cost of the GREs and applications.

August–September

1. Download program information and applications from websites.
2. Receive information packets and read through them.
3. Consult with advisors regarding graduate programs and faculty of interest.
4. Continue to study diligently for the GREs.
5. Update your curriculum vitae/resume.
6. Investigate possible financial aid opportunities.
7. Gather applications for salient fellowships and scholarships.
September–October
1. Take the GRE General Test (for first or second time).
2. Register for the GRE Psychology Subject Test administered in November and December.
3. Create a short list of schools to which you will apply.
4. Choose the faculty at each school that most interest you.
5. Request a copy of your transcript and inspect it for any errors or omissions.
6. Begin first drafts of your personal statement and get feedback on it.
7. Calculate costs of applications and admission interviews and acquire the money for them.
8. Finalize the decision on whom you will ask for letters of recommendation.
9. Formulate your Plan B (i.e., what you will do if not accepted into a graduate program).

October–November
1. Take the GRE Psychology Subject Test.
2. Prepare packets to distribute to your recommenders, including a CV or resume.
3. Request letters of recommendation.
4. Arrange for the Registrar to send your transcripts to graduate schools.
5. Gather information on financial aid and loans available to graduate students.
6. Finalize your personal statements.

November–December
1. Complete applications.
2. Submit applications.
3. Verify that the applications and all necessary materials have been received.
4. Request ETS forward your GRE scores to the appropriate institutions.

January–March
1. Wait patiently.
2. Ensure that all of your letters of recommendation have been sent.
3. Complete the Free Application for Federal Student Aid at www.fafsa.ed.gov to determine what federal loans you can count on.
4. Be prepared for surprise telephone interviews.
5. Practice and prepare for admission interviews.
6. Travel to interviews as invited.
7. Develop contingency plans (Plan B) if not accepted into any graduate programs.

April–May
1. If other programs make early offers, contact your top choices to determine your status.
2. Accept an offer of admission and promptly turn down less-preferred offers.
3. Finalize financial aid arrangements for next year.
4. If not accepted to any schools, proceed to Plan B.
5. Celebrate (if accepted) or regroup (if not accepted).
6. Inform people who wrote you letters of recommendation of the outcome.
XIII. How To Become Involved

Students frequently learn too late that active involvement outside of the classroom is an indispensable education in itself as well as a critical factor in obtaining employment and gaining admission to graduate school. Consider the following student qualities contained in standard recommendation forms:

<table>
<thead>
<tr>
<th>Academic performance</th>
<th>Judgment/common sense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking skills</td>
<td>Interpersonal abilities</td>
</tr>
<tr>
<td>Organizational skills</td>
<td>Integrity</td>
</tr>
<tr>
<td>Originality/resourcefulness</td>
<td>Responsibility/dependability</td>
</tr>
<tr>
<td>Interest/enthusiasm</td>
<td>Writing skills</td>
</tr>
</tbody>
</table>

Most of these dimensions refer to faculty-student interactions outside of the classroom, not to your course grades. Many a bright student has sabotaged his or her educational experience and career goal by not becoming involved outside of the classroom. The common lament -- in the senior year -- is "If only I'd known earlier to get involved!"

The moral of the story? *Become involved early and stay active.* Below are several methods nominated by our graduates.

- **Psychology Club** -- open to all students, particularly psychology majors and minors. Activities of the club include socials, speakers, and picnics. Watch for announcements throughout the year.

- **APSSC** -- the local chapter of the Association for Psychological Science Student Caucus, for which you must first become an affiliate of the APS (see below).

- **Psi Chi** -- the international psychology honor society open to juniors and seniors who meet national and local criteria for grades. Activities of Psi Chi include student conferences and national newsletters.

- **Research with a professor** -- students may work with a faculty member in planning studies, collecting data, analyzing the results, and the like. The department strongly encourages psychology majors to enroll in the Undergraduate Research course (Psyc. 493-494) for credit during their junior year. Feel free to approach any professor regarding his/her research interests and projects.

- **Become an APA or APS affiliate** -- you can join the American Psychological Association (APA) for a nominal fee, which includes monthly issues of the *American Psychologist* and the *Monitor on Psychology*. You can also join the Association for Psychological Science (APS) as a student affiliate, which includes monthly issues of *Psychological Science* and the *APS Observer*.

- **Attend University functions** -- be seen and see other students/faculty at workshops, meetings, talks, plays, and other university functions.
XIV. Additional Resources


Society for Industrial and Organizational Psychology. *Graduate training programs in industrial/organizational psychology and related fields.* Online at www.siop.org/GTP/

Advising Resources

Graduating psychology majors at the University of Scranton complete a senior seminar (History & Literature of Psychology II) in which they provide written advice in the form of letters to incoming psychology freshmen. Quantitative analyses of 101 of these letters produced the following list of frequent advice from those who have already "been there and done that."

Prevailing advice centers on becoming involved in student organizations, cultivating study skills, securing research experience, and living college to its fullest. Heed these sage recommendations from your peers!

Most Frequent Advice Rendered by Graduating Psychology Majors

<table>
<thead>
<tr>
<th>Advice/Recommendation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get involved in psychology student organizations</td>
<td>62</td>
</tr>
<tr>
<td>Cultivate good study skills</td>
<td>51</td>
</tr>
<tr>
<td>Secure research experience</td>
<td>46</td>
</tr>
<tr>
<td>Follow advice about Research Methods course</td>
<td>45</td>
</tr>
<tr>
<td>Enjoy it/Live college to the fullest</td>
<td>44</td>
</tr>
<tr>
<td>Other/assorted advice</td>
<td>43</td>
</tr>
<tr>
<td>Seek help of psychology faculty</td>
<td>42</td>
</tr>
<tr>
<td>Get to know your professors</td>
<td>41</td>
</tr>
<tr>
<td>Become involved in university life</td>
<td>41</td>
</tr>
<tr>
<td>Prepare for graduate school</td>
<td>39</td>
</tr>
<tr>
<td>Realize fellow students can help</td>
<td>33</td>
</tr>
<tr>
<td>Manage your stress</td>
<td>30</td>
</tr>
<tr>
<td>Balance academic and social life</td>
<td>27</td>
</tr>
</tbody>
</table>
Understand program requirements 25
Explore other areas/minors 24
Maintain personal motivation 24
Remember that the Psyc courses will be difficult 23
Never hesitate to ask questions 21
Obtain practical experience 20
Choose classes related to your expected career 19
Seek advice of psychology advisors 19
Select/switch advisors you get along with 19

**Advising Quiz**

With this *Handbook*, you should be able to answer most of the following 10 questions. If you are still uncertain about any of these matters, then please review the relevant sections of the *Handbook* or speak to your psychology advisor.

1. What courses can go into your free elective?
2. What is the minimum number of core eight psychology courses required for a major?
3. When is the earliest a student can get involved in research?
4. When should a student interested in going immediately on to graduate school take the GREs?
5. Beyond the field experiences courses, how can I obtain applied experiences in my field?
6. Is it necessary to do research for course credit?
7. Must I take a psychology course with the corresponding lab?
8. How can students change courses after leaving registration?
9. Which psychology elective courses are most appropriate for someone with my interests?
10. What are the three student organizations in the psychology department?