I. Preface

This handbook was written for you, the University of Scranton psychology student, to provide information on the department, to clarify curriculum offerings, and to present some of the 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 previously published material. Last, but not least, 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 over a period of 10 years 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 the handbook each year.
II. The Psychology Department

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

Faculty

Our twelve 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

The three departmental student organizations are 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 was founded in 1969 and 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, a GRE Psychology review, and trips to a regional convention.

The local chapter of the Association for Psychological Science Student Caucus was organized in 1991 to promote critical thinking and discussion of topics related to psychology.

2017-2018 Student Organization Officers

<table>
<thead>
<tr>
<th>Psychology Club</th>
<th>Psi Chi</th>
<th>APSSC</th>
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</thead>
<tbody>
<tr>
<td>President – Regina Fasano</td>
<td>President – Erin Alexander</td>
<td>President – Sabrina DiBisceglie</td>
</tr>
<tr>
<td>Vice President – Nicole Plantier</td>
<td>Vice President – Rachel Poirier</td>
<td>Vice President – Timothy Dodds</td>
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<tr>
<td>Secretary -- Sabrina DiBisceglie</td>
<td>Secretary -- Sabrina DiBisceglie</td>
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<tr>
<td>Treasurer – Rachel Poirier</td>
<td>Treasurer -- Kerrianne Mazur</td>
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</table>
Facilities

Research - The department has over 1100 feet of research space including computer-based laboratories for biopsychology, health psychology, information processing, psycholinguistic, and social psychology research. Environmentally-controlled animal facilities, wet and dry laboratories for neuroscience research are housed in the science building.

Computers - The department is at the forefront of computer applications. We have over 48 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 word-processing, statistical packages, computer-assisted instruction, graphics, data analysis, library, research applications, the Internet, and the World Wide Web. The department’s computer facilities include a computer laboratory equipped with 10 PC stations, a cognitive/perception computer simulation laboratory, information processing research laboratory, and a social psychology research laboratory. Also included on the psychology floor are two full mediated classrooms and one fully mediated seminar room with an additional 12 PC stations.

Affiliations - The Psychology Department is a charter member of the Council of Undergraduate Psychology Programs (CUPP). 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 2017, our graduating psychology seniors gave the overall program a mean score of 3.60 (out of 4.0) and quality of teaching in psychology courses received a mean score of 3.57. Also, the graduating class gave the department a mean score of 3.38 for opportunities to do research and 3.37 for the opportunities for practical experience.

- A notable proportion of our graduates go on to Ph.D. programs in psychology with financial assistance. Achievement is also demonstrated in a study from the Office of Institutional Research at Franklin and Marshall College, which shows that over the last decade for which data were analyzed (1986-1995), the University of Scranton ranked 24th out of 254 comparable 4-year private institutions as the baccalaureate source of Ph.D.'s in Psychology. Twenty University graduates received doctorates in psychology during the 1990's. As of the end of May 2017, nine of our 40 graduating seniors reported obtaining acceptance to graduate or professional school.

- Our students' knowledge of psychology, as measured by standardized tests, 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, the University of Scranton scored at 75th percentile on the psychology achievement test in Spring 2015.

- Psychology majors continue to conduct and present research at a significant rate. In the 2016-2017 academic year, for example, 20 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. Dr. Thomas Hogan was named the 2000 CASE Professor of the Year at the University of Scranton. Dr. Hogan also received the 32nd Annual Gannon Memorial Award for Teaching (2000), was honored with the Teacher of the Year Award by the Class of 2000, and was recognized as Distinguished University Fellow (2003). The University of Scranton chapter of the American Psychological Society Student Caucus was chosen as the outstanding chapter in the country in 1992 and 1995. Dr. John Norcross received the Distinguished Career Contributions to Education & Training Award from the American Psychological Association, was recognized as a Distinguished University Fellow (2004), and was recently awarded the 2014 Alfred M. Wellner, PhD, Lifetime Achievement Award by the National Register of Health Service Psychologists. Dr. John O’Malley received the University’s Teacher of the Year Award in 2009 and the 2014-2015 Alpha Sigma Nu Teacher of the Year Award.

• In terms of individual honors, in 2016-2017, nine of our graduating seniors (7 majors, 2 minors) were listed in Who’s Who and 13 of our graduating seniors were members of Psi Chi, the International Honor Society in Psychology.

III. The Faculty

Danielle Arigo, Ph.D.

Dr. Arigo received her baccalaureate from Drexel University, and earned her PhD in Clinical Psychology (Health Psychology/Behavioral Medicine emphasis) from Syracuse University. She completed her clinical internship at the Syracuse VA Medical Center, where she focused on behavioral medicine and treatment for PTSD among military veterans, and remains an affiliate of the VA Center for Integrated Healthcare. Her research investigates the use of social information to inform health decisions and health behaviors, including social facilitation of health behavior change via web-based social networking. Much of this work focuses on the influence of social comparisons on health behaviors in populations with eating- and weight-related conditions, including obesity, type 2 diabetes, celiac disease, eating disorders, and body dissatisfaction. She also specializes in the delivery of cognitive-behavioral interventions for health behavior change in medical settings. Dr. Arigo teaches Health Psychology, Abnormal Psychology, Personality & Individual Differences, and Fundamentals of Psychology, and directs the Clinical Health Psychology Research Group.

Representative publications (*denotes student co-author):


**James P. Buchanan, Ph.D.**

Dr. Buchanan received his baccalaureate from Johns Hopkins University and his doctorate in developmental psychology from UCLA in 1975. He teaches Childhood and Fundamentals of Psychology. His research interests include cognitive development, social cognition, and applied cognition. Representative research:


**Bryan R. Burnham, Ph.D.**

Dr. Burnham received his baccalaureate from Utica College of Syracuse University in 2002 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 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:


Thomas P. Hogan, Ph.D.

Dr. Hogan received his baccalaureate from John Carroll University and his doctorate in psychology with specialization in psychometrics from Fordham University. For ten years he was Dean of the Graduate School and Director of Research at the University of Scranton. He has also served as Interim Provost/Academic Vice President. He teaches Statistics, Psychological Testing, and Research Methods, as well as the TA seminar. His research interests include educational and psychological test development, quantitative estimation, and mathematics assessment. Representative research:


Christie Pugh Karpiak, Ph.D.

Dr. Karpiak earned her baccalaureate, master’s degree, and doctorate (awarded 1999) from the University of Utah, and completed her predoctoral 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, including work with students (marked *):


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.


Barry X. Kuhle, Ph.D.

Professor Kuhle received his baccalaureate from Binghamton University in 1997 and his doctorate in evolutionary psychology from The University of Texas at Austin in 2002. He teaches Evolutionary Psychology, Fundamentals of Psychology, Statistics in the Behavioral Sciences, and Research Methods in the Behavioral Sciences. His research focuses on the evolved psychological mechanisms that underlie jealousy and humor in romantic relationships. He is also interested in (a) the evolution and development of both sexual fluidity and reproductive senescence in women and (b) sex differences in how women and men advertise themselves and what they report seeking on Tinder. Representative research (*denotes student co-author):


Kuhle, B. X. (2012). It’s funny because it’s true (because it evokes our evolved psychology). *Review of General Psychology*, 16, 177-186.

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 Fundamentals of Psychology, Social Psychology, Environmental & Conservation Psychology, The 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, APA Division of Psychotherapy, and Society for the Exploration of Psychotherapy Integration. 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, clinical practice, undergraduate education, and graduate admissions. 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, where she analyzed data sets concerning stress and health in the elderly. She teaches Adulthood and Aging and Childhood. 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, Fundamentals of Psychology, 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 and Exercise & Sport Psychology

**Psychology Lecturers**

<table>
<thead>
<tr>
<th>Edward Heffron, Ed.D.</th>
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<tbody>
<tr>
<td>Teaches Fundamentals of Psychology and Adulthood &amp; Aging</td>
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<tr>
<td>Carl Schuster, Ph.D.</td>
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<tr>
<td>Teaches Personality and Abnormal Psychology</td>
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<tr>
<th>Michael Oakes, Ph.D.</th>
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<tbody>
<tr>
<td>Teaches Fundamentals of Psychology, Drugs &amp; Behavior, and Brain &amp; Human Nature</td>
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<tr>
<td>Joseph A. Tellish, Ph.D.</td>
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<tr>
<td>Teaches Fundamentals of Psychology and Behavior Modification</td>
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</table>
IV. The Curriculum

The Psychology Major

I. Psychology majors are required to take the following courses:
   Fundamentals of Psychology (Psyc 110)
   * Fundamentals of Psychology Lab (Psyc 110L)
   Statistics in the Behavioral Sciences (Psyc 210)
   Research Methods in the Behavioral Sciences (Psyc 330 & 330L)
   Junior Seminar—Career Development 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, 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. Completion of two optional psychology labs or advanced topics seminars constitutes an elective course.

* Only if enrolled in the "majors only" Fall Psyc 110 for entering freshmen.
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) (only one course may be counted as a Psychology elective)
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 table describes the sequence of psychology courses you should take, including total credits. This is the same information contained in the 2016-2017 University catalog. Not everyone will fit neatly into this table, 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. How to Use Your Advisor).
### The Psychology Curriculum

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<th>Freshmen</th>
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<td>MAJOR</td>
<td>PSYC 110(^3)-ELECT</td>
<td>Fund. of Psyc(^2)-Psyc Elective</td>
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<td>Computer and Information Literacy</td>
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<td>GE QUAN</td>
<td>MATH ELECT (^1)</td>
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<tr>
<td>GE S/BH</td>
<td>SOC 110(^2)</td>
<td>Intro to Sociology(^2)</td>
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<td>GE WRTG-SPCH</td>
<td>WRTG 107-COMM 100</td>
<td>Composition-Public Speaking</td>
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<td>GE HUMN</td>
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<td>Humanities Elective</td>
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<td>GE PHIL</td>
<td>PHIL 120-210</td>
<td>Intro. to Philosophy- Ethics</td>
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<td>GE FSEM</td>
<td>FYS</td>
<td>First Year Seminar(^6)</td>
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**Sophomore**

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<tr>
<td>MAJOR</td>
<td>PSYC 210-330 &amp; 330L</td>
<td>Statistics - Research Methods</td>
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<td>GE ELECT</td>
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<td>Elective(^3)</td>
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<tr>
<td>GE NSCI</td>
<td>NSCI ELECT(^3)</td>
<td>Elective(^3)-Elective(^3)</td>
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**Junior**

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<td>T/RS 121-122</td>
<td>Theology I-Theology II</td>
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**Senior**

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<th>Fall</th>
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<tr>
<td>MAJOR</td>
<td>MAJOR ELECTIVE</td>
<td>Psychology Elective</td>
<td>3</td>
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<tr>
<td>MAJOR</td>
<td>PSYC 490-491</td>
<td>History &amp; Lit. of Psyc I &amp; II</td>
<td>1.5</td>
<td>1.5</td>
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<tr>
<td>GE T/RS or PHIL</td>
<td>PHIL or T/RS</td>
<td>Elective</td>
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<tr>
<td>GE ELECT</td>
<td>E</td>
<td>Free Elective - Free Electives</td>
<td>9</td>
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<td>16.5</td>
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**TOTAL: 123 CREDITS**

\(^1\)MATH 103, 106, or 114

\(^2\)The Department strongly recommends SOC 110, Intro to Sociology.

\(^3\) One 3- or 4-credit NSCI BIOL course and one additional 3- or 4-credit NSCI BIOL, CHEM, or PHYS course.

\(^4\)No more than 15 credits of psychology can be placed in GE Elective

\(^5\)Entering Fall semester Freshmen enrolled in the majors only PSYC 110 sections must also enroll in PSYC 110L. PSYC 110L is required only for entering Fall semester Freshmen Psychology majors.

\(^6\)The selection of a First Year Seminar is likely to fulfill requirements both for the First Year Seminar and a General Education Requirement. Thus, the First Year Seminar will not add to the total credits for the semester. Talk with your advisor if you have any questions.
The Psychology Minor
A minor in psychology consists of Psyc 110, Psyc 210, Psyc 330 Lecture (a specific section is assigned to 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. Psyc 330 for minors is offered once each Spring. Psyc 330 for majors can be substituted for Psyc 330 for minors only if taken while a Psychology major. Psychology minors cannot take the Psyc 330 sections for majors. Total: 18 credits in Psychology.

V. Psychology as a Major
As a major, psychology provides a unique educational experience of quality, breadth, and flexibility. An U.S. Department of Education survey of bachelor's degrees awarded in 1992-1993 revealed that nationally, psychology is the second most popular undergraduate degree. 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 level 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 percent of comparable institutions nationally in terms of students who go on to earn doctorates in psychology. In the most recent 5 year period for which data are available, an average of 2 of our graduates receive a doctoral degree annually. 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 and placed in our "core eight" categories.
Psychology Career Paths

Psychology is a diverse and evolving discipline. The required and "core eight" courses in the major provide the broad background necessary both for admission to a variety of graduate programs and 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 in particular areas. Remember, however, graduate programs typically are looking for students that possess a broad background in the field of 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 the field of social work.

These recommended courses provide a firm grounding in general psychopathology, interviewing skills, clinical assessment, and intervention strategies. In their junior or senior year, students may complete 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 modality. This choice can match students' personal interests and career goals. Students keep the following recommendations in mind. The first 4 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; Fall of Junior year or Fall of 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/HD 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).

It should be emphasized that these courses alone are insufficient for graduate training or advanced practice in psychology. These recommended courses are embedded within the psychology major in order to insure that students will be broadly trained in psychological content and methodology.

Students interested in the clinical area frequently believe they should avoid non-clinical coursework. This is an erroneous belief. The American Psychological Association (APA) requires ALL accredited graduate programs in clinical, counseling, and school psychology to
provide a solid foundation of knowledge in the discipline of psychology. All APA-accredited programs require their students to take at least one graduate course in each of the following areas:

- research design
- statistics
- psychological testing
- history and systems
- biological bases (e.g., physiological, comparative)
- cognitive-affective bases (e.g., learning, cognition)
- social bases (e.g., social, cultural, organizational)
- individual bases (e.g., developmental, abnormal)

An indication of the types of 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>Laboratory course</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Field experience</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Biopsychology/Physiological Psychology

Here we recommend a range of courses relevant to understanding the biological foundations of behavior. They provide the background necessary for admission into traditional physiological 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. In general, 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, 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

These recommended 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 -- and are designed for students seeking both entry-level employment and graduate training in cognitive psychology, human factors, or cognitive science. The courses follow.
I. Strongly Recommended Courses in Psychology
   A. Psyc 234 – Cognitive Psychology & Cognitive Psychology Lab.
   B. Psyc 230 – Sensation and Perception & Sensation and Perception Lab.
   C. Psyc 231 – Behavioral Neuroscience & Behavioral Neuroscience Lab
   D. Psyc 232 – Psychology of Language
   E. Psyc 350 – Cognitive Neuroscience

II. Strongly Recommended Courses Outside of Psychology
   A. CMPS 134 – Computer Science I
   B. Phil 215 - Logic

III. Additional, Recommended Courses
   A. Psyc 221 – Childhood
   B. Psyc 493 - 494 Undergraduate Research

Related Academic Programs
Minors, concentrations, and double majors outside of the psychology program are possible and sometimes desirable. With careful planning, 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 necessary requirements will be met.

An academic program which has historically been of special interest to University of Scranton psychology students because it is in a related academic discipline and because it is coordinated by a psychology faculty member is a Human Development Concentration. Dr. Buchanan coordinates a Human Development Concentration that is especially attractive to students majoring in the social and behavioral sciences. Minors and concentrations must be formally declared in writing through the Registrar's Office. If you are interested in this academic program, read the following description and then consult Dr. Buchanan for further information and the necessary paperwork.

Human Development Concentration
The 30-credit interdisciplinary Human Development 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)
   or Introduction to Social Work (Soc 115)
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),
   or 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)
   or Internship in Social Work (Soc 480)

*Industrial-Organizational or Personnel Psychology*

For students interested in personnel, or industrial-organizational psychology, a business minor is recommended. Psychological Testing (Psyc 335) is also suggested.

**VI. Advising**

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

1. This *Psychology Handbook* represents the department's consensus on a number of vital advising issues ranging from career choices to annual course listings. 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.

2. The Department has developed advising sheets that both list academic requirements and hold relevant advising paperwork forwarded by the CAS Academic Advising Center. Students and faculty use these folders and the evaluation sheets to track academic progress. A sample copy of the psychology advising folder is reproduced in the following pages.

3. 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.)

4. The department offers a 1-credit Career Development in Psychology. This seminar is designed for Psychology majors in their junior year, entails studying, discussing, and applying information on academic planning, career development, and graduate school.

5. The department has a Psychology Department Advising Resource Page on its web page, which provides students with a list of psychology faculty advisors, the master schedule for the current semester, the tentative master schedule for the next academic year, a listing of the psychology curriculum, a psychology curriculum worksheet, a pre-advising checklist, a credit/course progress grid, an ideal time timeline for aid in gaining admission to graduate school, and a listing of important updates.

**How To Use Your Advisor**

Sometimes students think that they need a reason for going to their advisor, such as for signatures or changing their major. This is a fallacy. When you have questions, go to your advisor. But 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, 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 take time out to chat informally with students. Since a diversity of interactions is useful, feel free to approach other professors as well, especially those who have expertise in the same field 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 evaluation sheet, copies of any schedule changes, and copies of paperwork related to grades.
- Read the Undergraduate Catalog and Psychology Handbook. You should become familiar with the psychology major (and minor, if applicable), the general education requirements, and all academic regulations. You should consult the catalog descriptions of any course you plan to take, and you should make sure that you have all necessary prerequisites for courses.
- 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. If you request a course substitution or waiver, kindly inform us.
• Allow adequate time for advising during registration. Consult your advisor's schedule of office hours and make an appointment to see him or her as early as possible during the registration period. Also examine your evaluation 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 deadline, then you will be denied your registration ticket. 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 Misconceptions and Problems

1. Students have 30 credits of GE free electives. Up to 15 credits of psychology can be put in the GE free electives. Undergraduate Research in Psychology (Psyc 493-494) credits should be placed in the GE free elective. Also, only one Special Topics course can be used as a Psychology elective. Any additional Special Topics courses have to be placed in the GE free electives.
2. Students should be aware that they can develop minors and concentrations by judiciously using GE free electives and other general education (GE) courses.
3. The GE requirements need not be taken in the sequence set out in the catalog. Students have a great deal of flexibility in this regard.
4. Students should take a diversity of psychology courses early in their undergraduate career and strive for breadth of exposure in psychology. Remember, we strongly recommend that you take one course from each of the four core eight categories by the time you complete your fifth elective in psychology. This would typically be the first semester of your junior year.
5. Core courses may also count as psychology electives, i.e., a student who takes one course in a pair to satisfy the "core requirement" may take the other course as a psychology elective.
6. Students need to be more aware of the scheduling of courses, particularly those offered only one time per year. This would facilitate their curriculum planning.
7. Students should also be more aware of the importance of Abnormal Psychology as a prerequisite for several courses of interest to students taking courses relevant to clinical/counseling/school psychology.
8. Students should 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.
9. Students should review the criteria for taking Undergraduate Research in Psychology to avoid confusion. The criteria are listed in section IV of this Handbook.
10. Students should realize that they can tailor the psychology major towards their interests. They should consult with their advisor for recommended courses, by major and GE free electives, to meet their individual interests for later employment and/or graduate school.
11. Students are unaware of the ideal timing for psychology Field Experience courses. Try to arrange it after all the prerequisites have been met and ideally in Spring of the junior year or Fall of the senior year.
12. Students need to better understand and exercise their role in the advising process. Advising is not just something the professor does. It is an active, collaborative process requiring preparation by the student.
13. Students need to 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 the student adequately.
14. Undergraduate Research in Psychology does not apply solely to students planning to attend graduate school. This is explained in Section IX of this Handbook.
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 any major 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, SJLA, 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 (see grid on back for credits by semester)
☐ 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 (see grid on back for ideal progress)
☐ Are you behind schedule for completing required courses and core sequence?
☐ Want to discuss your schedule for completing the 41.5 - 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)

* 42 total credits if student enters as a first-year psychology major and takes Psyc 110L
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Name</th>
<th>Term Taken</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
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<td></td>
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<tr>
<td>Freshman</td>
<td>Fund. of Psych. (w.lab)</td>
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<td>Psyc 110+L</td>
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<tr>
<td>First Year Seminar¹</td>
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<td>WRTG 107</td>
<td>Composition</td>
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<td>PHIL 120</td>
<td>Intro. to Philosophy</td>
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<tr>
<td>C/IL 102</td>
<td>Computer Literacy</td>
<td></td>
<td></td>
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<tr>
<td>MATH</td>
<td>103, 106, or 114¹</td>
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<td></td>
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<tr>
<td>Sophomore</td>
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</tr>
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<td>Psyc 210</td>
<td>Statistics in Beh. Sci.</td>
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<tr>
<td>Psyc</td>
<td>Elective (from Core 8)¹</td>
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<tr>
<td>NSCI BIOL</td>
<td>NSCI Biology Elective¹</td>
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<tr>
<td>HUM</td>
<td>Humanities elective¹</td>
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<tr>
<td>GE</td>
<td>Any GE Elective</td>
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<td>Junior</td>
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</tr>
<tr>
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<td>Elective (from Core 8)¹</td>
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</tr>
<tr>
<td>Psyc</td>
<td>Elective</td>
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<tr>
<td>Psyc 390</td>
<td>Career Dev</td>
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</tr>
<tr>
<td>T/RS 121</td>
<td>Theology I</td>
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<td>HUM</td>
<td>Humanities elective³</td>
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<tr>
<td>Senior</td>
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<tr>
<td>Psyc</td>
<td>Elective</td>
<td></td>
<td></td>
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<tr>
<td>Psyc 490</td>
<td>History and Lit. I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psyc 220 Social Psychology or Psyc 221 Childhood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psyc 224 Personality and Individual Differences or Psyc 225 Abnormal Psychology</td>
<td></td>
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<tr>
<td>Psyc 230 Sensation and Perception (lab Sp only)* or Psyc 231 Behavioral Neuroscience (lab Fall only)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psyc 234 Cognitive Psychology (Fall only)* or Psyc 235 Conditioning and Learning (Sp only)*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Core 8 courses: Majors need to take 5 courses from the core 8 with at least one from each of the following pairs:
- Psyc 220 Social Psychology or Psyc 221 Childhood
- Psyc 224 Personality and Individual Differences or Psyc 225 Abnormal Psychology
- Psyc 230 Sensation and Perception (lab Sp only)* or Psyc 231 Behavioral Neuroscience (lab Fall only)*
- Psyc 234 Cognitive Psychology (Fall only)* or Psyc 235 Conditioning and Learning (Sp only)*

* indicates that there is an optional lab associated with this course. Two optional labs can replace a Psyc elective (not a core 8 elective).

2 The selection of a First Year Seminar will fulfill the requirement for the First Year Seminar and may fulfill a General Education requirement. Make sure the course has a FYS prefix.

3 Humanities: History (CH), Literature (CL), or Foreign Languages (CF), Arts/Music/Theatre (CA), or Humanities Interdisciplinary (CI)

4 Courses designated with an (E) in the course catalog.

5 Courses designated with a (P) in the course catalog.
<table>
<thead>
<tr>
<th>Course #</th>
<th>Credit</th>
<th>Course name</th>
<th>Term Taken</th>
<th>Registering For</th>
<th>Projected Term</th>
<th>Grade</th>
<th>Comments: substitutions, waivers, etc.</th>
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</thead>
<tbody>
<tr>
<td><strong>Required</strong></td>
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<td>Lec/ Lab</td>
<td>Lec/Lab</td>
<td>Lec/Lab</td>
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<td>Psyc 110 +L</td>
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<td>Funds. of Psychology (w. lab)</td>
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<td>Psyc 210</td>
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<td>Statistics in Beh. Sci.</td>
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<td>Jr. Sem (Career Devel)</td>
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<tr>
<td>Psyc 490</td>
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<td>History &amp; Lit. of Psyc I</td>
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<tr>
<td>Psyc 491</td>
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<td>History &amp; Lit. of Psyc II</td>
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</table>

**Core 8: Students must choose at least 1 from each of the following pairs. Circle selected course in each pair.**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Credit</th>
<th>Course name</th>
<th>Term Taken</th>
<th>Registering For</th>
<th>Projected Term</th>
<th>Grade</th>
<th>Comments: substitutions, waivers, etc.</th>
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</thead>
<tbody>
<tr>
<td>Psyc 220 or 221</td>
<td>3.0</td>
<td>Social Psychology or Childhood</td>
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<tr>
<td>Psyc 224 or 225</td>
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<td>Personality and Individual Differences or Abnormal</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Psyc 230 or 231</td>
<td>3-4.5</td>
<td>Sensation and Perception* or Behavioral Neuroscience*</td>
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</tr>
<tr>
<td>Psyc 234 or 235</td>
<td>3-4.5</td>
<td>Cognitive Psychology* or Conditioning and Learning*</td>
<td></td>
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</tr>
</tbody>
</table>

* Sensation and Perception and Cognitive Labs = 1.0 credit; Behavioral Neuroscience and Conditioning and Learning Labs = 1.5 credits.

**Psyc Electives: one elective must come from the Core 8. (2) optional labs can replace one elective.**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Credit</th>
<th>Course name</th>
<th>Term Taken</th>
<th>Registering For</th>
<th>Projected Term</th>
<th>Grade</th>
<th>Comments: substitutions, waivers, etc.</th>
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<td>Core 8:</td>
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<tr>
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<tr>
<td></td>
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<td></td>
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<tr>
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</tbody>
</table>

* 42: (Standard) with P110 Lab and no optional labs or Advanced Topic Seminars replacing one elective --- 41.5: no P110 Lab and no optional labs or Advanced Topic Seminars replacing one elective --- 40.5: no P110 Lab but taking two 1-credit labs or Advanced Topic Seminars replacing one elective

**Skills**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Credit</th>
<th>Course name</th>
<th>Term Taken</th>
<th>Registering For</th>
<th>Projected Term</th>
<th>Grade</th>
<th>Comments: substitutions, waivers, etc.</th>
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**An EP class can count for two**
Electives (30 Credits; no more than 15 in Psyc; use this area for minors, concentrations, etc. ***)

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Social/Behavioral Science (6 credits)

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Natural Science (6 credits)

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Philosophy & T/RS (15 credits)

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Writing Intensive Courses (from above):

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<td>Cultural Diversity Courses (from above):</td>
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*** Note here requirements for minors, concentrations, etc.:
Advice

(Accumulated from multiple psychology professors)

Plan on completing 4 out of 5 of the Core 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.

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

To do research, you do NOT have to take it for credit. If you want to do research, start with volunteering or FSRP (both of which are free), and then take Undergraduate Research (PSYC 493 & 494) for credit. Undergraduate Research credits are to be placed in the 30 credits of free electives and not used as psychology electives. 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 psychology. Abnormal is a prerequisite for Clinical (PSYC 360).

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

If you are interested in doctoral level clinical psychology, you should seriously consider taking Behavioral Neuroscience (PSYC 231). Many Ph.D. programs in clinical want to see it on your transcript.

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, but you should also get experience on your own. Try to have at least 2 or 3 experience-based citations for your curriculum vitae if you are applying to Ph.D. programs in clinical.

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. To be on the right course for clinical, you should be taking other courses (e.g., Abnormal, Clinical, Psychological Testing, and Behavioral Neuroscience) first.

The Natural Science (NSCI) electives for fulfillment of the General Education requirements are courses designated with an (E). The first NSCI elective must be from Biology and the second may be from Biology, Chemistry, or Physics. A PHIL or T/RS elective is designated with a (P).

Note that 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.

Any combination of two PSYC labs and/or Psyc 492, Advanced Topics Seminars, fulfills a 3-credit Psychology elective requirement. If you take only one PSYC lab or an Advanced Topics Seminar, it will just be an extra one or two credits on your transcript.
### Ideal Credit Course Progress Grid

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<th>Semester</th>
<th>Freshman Fall</th>
<th>Freshman Spring</th>
<th>Sophomore Fall</th>
<th>Sophomore Spring</th>
<th>Junior Fall</th>
<th>Junior Spring</th>
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<td>9</td>
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<td>Cumul. PSYC</td>
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<td>6.5</td>
<td>12.5</td>
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<td>36</td>
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<tr>
<td>Credits</td>
<td>PSYC 110 &amp; 110L</td>
<td>1st core pair</td>
<td>PSYC 210</td>
<td>PSYC 330 &amp; 330L</td>
<td>PSYC 390</td>
<td>5th PSYC</td>
<td>PSYC 490</td>
<td>PSYC 491</td>
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<td>Caveats</td>
<td>PSYC 110L required only for entering Freshman. A grade of C or better is required in Psyc 110 to take any 200-level courses.</td>
<td>Core is one course from each of four core pairs.</td>
<td>If PSYC 210 is not taken in Fall, try Intersession</td>
<td>A grade of C or better in PSYC 210 is prerequisite for PSYC 330 &amp; 330L</td>
<td>If not met as a sophomore, need a C or better in PSYC 210 by end of this semester</td>
<td>Complete 4th core course by this semester. PSYC 330 &amp; 330L if not met as a sophomore need to be completed this semester</td>
<td>Ideally PSYC 480 should be completed here (prerequisites)</td>
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<td>NSCI b Biol, Chem, or Phys</td>
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<td>GE/Free Elective Caveats</td>
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* 123 total is for entering Freshman majors who have taken 110L; for those who transfer into the major after Freshman Fall semester the total remains 123 -- the minimum required credits for graduation.
** 42 total is for entering Freshman majors who have taken 110L; for those who transfer into major after Freshman Fall semester the total is 41.5
a Note total can drop .5 or 1 credit if lab/advanced seminar option is taken as one psychology elective
b Three credits have to be Biol; the other three can be Biol, Chem, Phys.
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:

1) Read the course description in the catalog.
2) Obtain more information about the course by visiting the professor who teaches it.
3) Ask other students about the reputation of the course.
4) Consider your career goals and interests up to this point.
5) Consult your advisor.

If you have a particular interest in psychology, 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, take a variety of courses to help you discover where your interests lie. Refer to the section "Careers in Psychology" for a description of the various areas of psychology.

Choosing GE Electives (30 Credits)
The 30 credits should be used first for concentrations, double majors, minors, and the like. If you have remaining credits, then you should use them to create a well-rounded program. Here are some popular hints for courses to round out your program:

1) Sociology courses, e.g., Juvenile Delinquency
2) Computer science courses
3) Advanced biology and beginning chemistry courses
4) A foreign language, especially Spanish if interested in the helping professions
5) Selected School of Management courses if interested in a psychology-related career in business.

These suggestions represent courses that psychology majors have taken in the past. You are by no means advised to take all of them; in fact, this would be impossible. Rather, 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).
### VIII. Example of a Master Schedule
(17-18 School Year -- Subject to Change)

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<thead>
<tr>
<th>FALL</th>
<th>Fundamentals of Psychology</th>
<th>(Psyc 110)</th>
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<td>(Psyc 221)</td>
<td>4 sections</td>
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<td>Psychological Testing</td>
<td>(Psyc 335)</td>
<td>1 section</td>
<td>Dr. Hogan</td>
</tr>
<tr>
<td></td>
<td>**Psychopharmacology</td>
<td>(Psyc 339)</td>
<td>1 section</td>
<td>Dr. Cannon</td>
</tr>
<tr>
<td></td>
<td>Cognitive Neuroscience</td>
<td>(Psyc 350)</td>
<td>1 section</td>
<td>Dr. Warker</td>
</tr>
<tr>
<td></td>
<td>Field Experience in Clinical Settings</td>
<td>(Psyc 480)</td>
<td>1 section</td>
<td>Dr. Norcross</td>
</tr>
<tr>
<td></td>
<td>Field Experience in Applied Psychology</td>
<td>(Psyc 481)</td>
<td>1 section</td>
<td>Dr. Norcross</td>
</tr>
<tr>
<td></td>
<td>*History and Literature of Psychology II</td>
<td>(Psyc 491)</td>
<td>4 sections</td>
<td>Drs. Hogan, Norcross</td>
</tr>
<tr>
<td></td>
<td>Undergraduate Research in Psychology</td>
<td>(Psyc 493-494)</td>
<td>1 section</td>
<td>Staff</td>
</tr>
</tbody>
</table>

Note: This sample schedule is intended for general planning purposes; some courses and individual faculty may change. In planning your program you should 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 (**).
IX. Undergraduate Research

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, and a B average across Statistics, Research Methods lecture, and a psychology course most relevant to the research being conducted.

The following section is adapted from Joseph Pallodino's article, which originally appeared in the March 1986 APA Monitor.

Caring for Inquiring Minds

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?"

As noted by David Cole, many of our students' questions and assumptions about human behavior can be subjected to empirical 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 truly liberating of the liberal arts," Cole wrote. 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 can be instilled in a variety of courses, including Fundamentals of Psychology. But we don't overwhelm students, and don't try to cram research down your throats. We believe in the maxim: Show 'em, don't tell 'em! 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 Research Methodology course.

- **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 carefully selecting research articles for you to analyze, using the pedagogical device previously described. Later, we may provide you with suggestions for potential projects. We also encourage you to consider the possibility of replicating prior research. As a discipline, we sometimes suffer from a failure to replicate.

- **Take a new look.** We have tried to alter some age-old thoughts about where research takes place. Though not suggesting an exodus from the lab, we try to increase the variability of 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 should be a minimum requirement. Participation in student research conferences is strongly encouraged. Since we have increased our emphasis on undergraduate research, there are even more such opportunities, providing forums for students to present their research efforts and to improve communications skills. The Annual University of Scranton Psychology Research Conference, organized and sponsored by the department, is a prime forum to present your research. Our students have also historically presented at the annual meeting of the Eastern Psychological Association (EPA) and regional undergraduate conferences.

The fruits of research. 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. It is also consistent with your career orientation if that orientation extends past entry-level positions.

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, few of you will recall the diagnostic criteria for any of the DSM-IV 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 can hope you will tackle the problem in a logical and methodological manner. You will be able to draw upon the published literature, and you will learn to use the current methods to access appropriate literature. You will be able to analyze and synthesize the literature. Applying the literature to the problem at hand will serve to crystallize the path to be taken. The variables involved will be operationalized, and the necessary data will be brought to bear on the problem at hand. You will be able to communicate your findings in a comprehensible manner, both orally and in writing.

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

Research Opportunities

The University of Scranton Psychology Department provides at least three 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. And third, Undergraduate Research in Psychology (Psyc 493-494) provides both academic credit and transcript recognition. Speak to your advisor or any psychology faculty about these exciting opportunities.

Representative Student Research

Below is a list of representative publications and presentations by our psychology students from 2013-2017. Student names are marked by an asterisk (*).


short-term mating men? Poster presented at the annual meeting of the NorthEastern Evolutionary Psychology Society, New Paltz, NY.


*Brezsinski, S., & Kuhle, B.X. (2015, Summer). To Swipe Left or Right? Sex Differences in Tinder Profiles. 2015 University of Scranton President’s Fellowship for Summer Research.


Ackourey, M.R., Alexander, E.F., O'Hara, K.E., Tiroly, M.M., & Burnham, B.R. (May 2016). The Influence of Smiling on Age Perception. This is a summary of a replication study that was uploaded to an online repository. www.psychfiledrawer.org

Brown, C., Dodds, T., Hutton, G., Lau, A., Simonelli, A., Truitt, M., & Burnham, B.R. (May 2016). Red on Perceived Attractiveness of Men. This is a summary of a replication study that was uploaded to an online repository. www.psychfiledrawer.org

Buzad, A.K., Bravo, K., DelVecchio, A.M., Mazzuca, T.F., & Burnham, B.R. (May 2016). Background Color on Perceived Attractiveness. This is a summary of a replication study that was uploaded to an online repository. www.psychfiledrawer.org


X. 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.
### Number of Doctorates Awarded by Psychology Subfield

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>883</td>
<td>1,329</td>
<td>2,650</td>
</tr>
<tr>
<td>Cognitive</td>
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<td>76</td>
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</tr>
<tr>
<td>Counseling</td>
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<tr>
<td>Developmental</td>
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<td>Experimental</td>
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<tr>
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<tr>
<td>Social</td>
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<tr>
<td>Other or general</td>
<td>387</td>
<td>560</td>
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<tr>
<td><strong>Total</strong></td>
<td>2,883</td>
<td>3,287</td>
<td>6,110</td>
</tr>
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</table>

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

### Clinical Psychology

Clinical psychologists assess and treat mental and emotional disorders. Such problems may range from the normal psychological crises related to biological growth (e.g., rebellion in adolescence, inadequate self-esteem at midlife) to extreme conditions such as schizophrenia or depression.

Many clinical psychologists also do research. For example, they may study the characteristics of psychotherapists that are associated with improvements in the condition of patients, or they may investigate the factors that contribute to successful aging, the development of phobias, or the causes of schizophrenia.

Clinical psychologists work in both academic institutions and health care settings such as clinics, hospitals, community mental health centers, and private practice. 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 phobias, 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, inner-city residents, ethnic groups, and rural dwellers. These opportunities exist in clinics, in other human service settings, and in private practice.

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 the following website: 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 the stresses of everyday life. Typically, counseling psychologists work with moderately maladjusted people, individually or in groups, assessing their needs and providing a variety of therapies, ranging from behavior modification to interpersonally oriented approaches. They apply systematic, research-based approaches to help themselves and others understand problems and develop potential solutions.

Counseling psychologists often use research to evaluate the effectiveness of treatments and to search for novel approaches to assessing problems and changing behavior. 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 to stop smoking or to 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.

Many counseling psychologists work in academic settings, but an increasing number are being employed in health care institutions, such as community mental health centers, Veterans Administration hospitals, and private clinics.

For further information in this area, please refer to the following website: 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. They also evaluate intervention programs such as Head Start and Follow Through and provide other direct services to children and families. 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:

**Educational Psychology**

Educational psychologists study how people learn, and they design the methods and materials used to educate people of all ages. Many 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. They may be employed by governmental agencies or the corporate sector to design and implement training programs.

Traditionally, job opportunities for educational psychologists have been concentrated in academic and educational settings and have been limited to those with doctoral degrees. Recently, industry and the military are offering increased possibilities for people with doctoral degrees who can design and evaluate systems to teach complex technical skills. There are new opportunities in evaluation of social problems and policies as well.

For further information in this area, please refer to the following website:
www.apa.org/divisions/div15

**Environmental Psychology**

Environmental psychologists are concerned with how humans affect, and are affected by, built and natural environments. Environmental psychology is an interdisciplinary field that draws on urban planning, architecture, political science, and anthropology. Topics of interest to environmental psychologists include territoriality, personal space, crowding, perceptions of the physical environment, cognitive mapping of places, wayfinding, effects of urban life on city dwellers, the restorative effects of nature, and the effects of weather, noise, lighting, and architectural design on human behavior and well-being. An environmental psychologist, for example, might study how we can improve the design of a neighborhood to reduce stress and crime. Environmental psychologists also apply their knowledge to design more habitable residential, urban, work, and learning environments.

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 the following website: www.apadivisions.org/division-34/interests/conservation. A listing of graduate programs in Environmental Psychology can be found by visiting www.apadivisions.org/division-34/about/resources/graduate-programs.aspx

**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 our 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, long-term mating, short-term 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 in the field, 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 services may address any aspect of athletes’ or performers’ lives, competitive or otherwise, to assist them in their performance and life endeavors.

Sport psychologists exam topics such as the ways an athlete can use visualization techniques to improve performance, ways to manage performance anxiety, 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 engage in clinical or consulting practice, helping individuals and teams improve their athletic performance and training coaches to help them become more efficient and productive in leading athletic teams.

For further information in this area, please refer to the following website: 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 about a variety of basic behavioral processes. These processes include: learning, sensation, perception, human performance, motivation, memory, language, thinking, and communication, and the physiological processes underlying behaviors such as eating, reading, and problem solving. Experimental psychologists study the basic
processes by which humans take in, store, retrieve, express, and apply knowledge. They also study the behavior of animals, often with a view to gaining a better understanding of human behavior, but sometimes also because it is intrinsically interesting.

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.

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

**Family Psychology**

Family psychologists are practitioners, researchers, and educators concerned with the prevention of family conflict, the treatment of marital/family problems, and the maintenance of normal family functioning. They concentrate on the family structure and the interaction between members rather than on the individual. As service providers, they often design and conduct programs for marital enrichment, pre-marital preparation, improved parent-child relations, and parent education about children with special needs. 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. They may study communication patterns in families with a hyperactive child or conduct research on child abuse or the effects of divorce and remarriage on family members.

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 practice, family institutes and community agencies. Job opportunities also exist for university teachers, forensic family psychologists, and consultants to industry.

For further information in this area, please refer to the following website:
www.apadivisions.org/division-43/index.aspx

**Forensic Psychology**

Psychology and law is a field with career opportunities at several levels of training. As an area of research, psychology and law is concerned both with looking at legal issues from a psychological perspective (e.g., how juries decide cases) and with looking at psychological questions in a legal context (e.g., how jurors assign blame or responsibility for a crime).

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 forensic psychologists counsel inmates and probationers; others counsel the victims of crimes and help them prepare to testify, cope with emotional distress, and resume their normal activities.

Some specialists in this field have doctoral degrees in both psychology and law. Others were trained in a traditional graduate 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, community mental health agencies, law enforcement agencies, courts, and correctional settings. Some forensic psychologists work in private practice.

For further information in this area, please refer to the following website: www.ap-ls.org

Geropsychology
Researchers in the psychology of aging (geropsychology) draw on sociology, biology, and other disciplines as well as psychology to 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. Clinicians in geropsychology apply their knowledge about the aging process to improve the psychological welfare of the elderly.

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.

Increases in the percentage of the population that is aged 65 or over and greater social attention to the needs of older persons have contributed to a growth in the demand for geropsychologists. Geropsychologists are finding jobs in academic settings, research centers, industry, health care organizations, mental health clinics, and agencies serving the elderly. Some are engaged in private practice, either as clinical or counseling psychologists, or as consultants on such matters as the design and the evaluation of programs.

For further information in this area, please refer to the following website: apadiv20.phhp.ufl.edu

Health Psychology
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 applied psychologists or clinicians, they may, for example, design and conduct programs to help individuals stop smoking, lose weight, manage stress, prevent cavities, or stay physically fit. As researchers, they seek to identify conditions and 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.
Doctoral programs in health psychology are just beginning to appear. Most health psychologists now earn their degree in another area of psychology, such as clinical or counseling, but concentrate their studies, research, and practical experiences in health psychology.

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

**Industrial/Organizational 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, training, and development of personnel; and the interaction between humans and machines. Their responsibilities on the job include research, development (translating the results of research into usable products or procedures), and problem solving.

Industrial/organizational psychologists work in businesses, industries, governments, and universities. Some may be self-employed as consultants or work for management consulting firms. In a business, industry, or government setting, industrial/organizational psychologists might study the procedures on an assembly line and suggest changes to reduce the monotony and increase the responsibility of workers. Or they might advise management on how to develop programs to identify staff with management potential or administer a service for employees on career development and preparation for retirement.

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.

Consumer psychologists are psychologists in a related area whose interests lie in consumers' reactions to a company's products or services. They investigate consumers' preferences for a particular package design or television commercial, for example, and develop strategies for marketing products. They also try to improve the acceptability and the safety of products and to help the consumer make better decisions.

Engineering psychologists are industrial/organizational psychologists concerned with improving the interaction between humans and their working environments, including jobs and the contexts in which they are performed. Engineering psychologists help design systems that require people and machines to interact, such as video-display units; they may also develop aids for training people to use those systems.

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 other neuropsychologists, clinical psychologists, and physicians. Most positions in neuropsychology and biopsychology 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 psychological and social factors affecting gender development and behavior. The field includes the study of stereotypes, the relation of hormones to behavior, the development of gender roles and identity, sexuality, and physical/sexual abuse.

Psychologists focusing on the psychology of women and men are found in academic settings and a variety of clinical settings. Current research topics include reactions to rape, factors that promote managerial success, factors that discourage talented girls from obtaining advanced mathematics training, and the causes of eating disorders such as anorexia. 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.

Most psychologists whose concern is gender studies have received their training in clinical, developmental, or social psychology, pursuing their special interest within these broader areas. Teaching positions for doctoral-level psychologists are available in psychology and women's studies departments. Researchers who focus on health issues have been hired as faculty members in nursing, public health, social work, or psychiatry departments of universities. Clinicians work in mental health centers and in private practice.

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

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, personality, and aptitude tests or devise new ones. These tests might be used in clinical, counseling and school settings, and in business and industry. 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, and 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 the following website:
www.apa.org/divisions/div5

**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 may evaluate and plan programs for children with special needs or deal with less severe problems such as 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 and teachers on ways to support a child's efforts in school, and consult with school administrators on a variety of psychological and educational issues.

To be employed in the public schools of a given state, school psychologists must have completed a state-approved training program (or the equivalent) 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. Many persons now practicing school psychology in the United States have been trained at the certificate level. APA's policy regarding use of the title "school psychologist" sets higher standards than do many state school psychology certification requirements. The APA standards require that individuals using the title "school psychologist" have a doctoral degree from a regionally accredited university providing a school psychology program in a department of psychology or a school of education (APA, 1981).

For further information in this area, please refer to the following website:
www.apadivisions.org/division-16/index.aspx

**Social Psychology**

Social psychologists study how people interact with each other and how they are affected by their social environments. They study individuals as well as groups, observable behaviors, and private thoughts. Topics of interest to social psychologists include personality theories, 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 subspecialty. 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-$120,000. 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 $100,000 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 earn on average $70,000 per year. Masters-level clinicians, such as counselors and social workers, in agencies will earn between $40,000 and $50,000 and those in private practice closer to $60,000.

High-paying jobs in psychology 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.

### 2015 Mean Salaries for Psychologists

<table>
<thead>
<tr>
<th>Type of Position</th>
<th>Doctoral level</th>
</tr>
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<tbody>
<tr>
<td>Faculty Position – Full Professor</td>
<td>$120,000</td>
</tr>
<tr>
<td>Faculty Position – Assistant Professor</td>
<td>$60,000</td>
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<tr>
<td>Educational Administration</td>
<td>$125,000</td>
</tr>
<tr>
<td>Private Practice</td>
<td>$100,000</td>
</tr>
<tr>
<td>Research Positions</td>
<td>$98,000</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: 2015 National Survey of College Graduates, National Science Foundation*
XI. Psychology and the Helping Professions

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

**Psychologist:** Doctorate (Ph.D., Psy.D.) in clinical or counseling psychology followed by a one or two 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 training.

**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 and the ACSW).

**Professional Counselor:** Master’s degree (MA, MS) in counseling followed by several years of supervised experience.

**Psychotherapist:** No academic degree required and not a legally protected term.

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 behavioral statistics and research methods in addition to clinical skills. Consequently, students oriented toward graduate training in any of the helping professions are well-served by the psychology core 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 health psychology. Accordingly, the most appropriate major for individuals with these interests is psychology.

XII. Careers with a Bachelor's Degree

Nearly 50 percent of all psychology graduates at the baccalaureate level will seek a full-time job immediately after they graduate. The good news is that of the psychology majors entering the labor force one year after graduation, 90 percent were employed. After two years, it was 94 percent.

Psychology is the second most popular undergraduate major behind business administration. In 1996, about 65,000 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 (1993) reports that 20 percent of psychology baccalaureate recipients work in social services or public affairs, 21 percent in administrative support, 14 percent in education, 10 percent in business, 10 percent in sales, 9 percent in service personnel, and 5 percent in health...
professions. An additional 3 percent find themselves working in computer science and an equal percentage in biological sciences.

The career of "psychologist" is not open to the BA or 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 in psychology. 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:

1. Critical thinking
2. Oral communication
3. Interpersonal skills
4. Writing ability
5. Problem-solving skills

Researchers contacted private employers and found a strong positive response to employees with human relations skills coupled with research skills. Other 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 recent 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 relationship 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 and 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):

<table>
<thead>
<tr>
<th>Trait</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality/motivation</td>
<td>35%</td>
</tr>
<tr>
<td>Education background</td>
<td>20%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>16%</td>
</tr>
<tr>
<td>Scholastic performance</td>
<td>12%</td>
</tr>
<tr>
<td>Intelligence</td>
<td>5%</td>
</tr>
<tr>
<td>Work-related experience</td>
<td>2%</td>
</tr>
</tbody>
</table>

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 Plethora of Job Opportunities

Students often think only of mental 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.
5. Personnel Administrator: works with employee relations, selection, promotions, etc.
7. Media Buyer: researches products and audiences to select most effective media for advertising.
9. Psychological Technician: administers routine tests, helps with patients under supervision of a psychologist.
10. Director of Volunteer Service: recruits, supervises, trains and evaluates volunteers.
11. Public Statistician: collects and interprets data on health and disease and community relations.
12. Customs Inspector: serves at international borders and airports in investigations and inquiries.
13. Probation/Parole Officer: persons with psychology backgrounds are often preferred for such positions, especially with adolescent parolees.
14. Technical Writer: researches and writes material dealing with social science for magazines, newspapers, and journals.
15. Sales Representative: major publishers of psychological books often seek out undergraduates with psychology majors for these positions on college campuses.
17. Daycare Center Supervisor: supervises and coordinates activities of preschool children with working parents.
18. Research Assistant: assists in the collection and analysis of data for major investigations. Positions usually available only in large hospitals, businesses, and government.

19. Laboratory Assistant: psychology background preferred for students working with animal behavior research, especially primate laboratories.


**We have not listed the numerous kinds of "counselor" roles that are available to many students with a bachelor's degree in a variety of social service and mental health agencies. Many of these programs provide interesting live-in possibilities with adequate pay; while they often do not have much of a future as a career, for a beginning post-bachelor's position they can be quite challenging.**

**Sources:**

The University of Scranton's Office of Career Services (OCS) conducts an annual survey of post-graduation activities. Following is a sampling of job titles reported by our psychology graduates in the past several years.

<table>
<thead>
<tr>
<th>ABA Counselor</th>
<th>Head Pre-School Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABA Teaching Aid</td>
<td>Healthcare Representative</td>
</tr>
<tr>
<td>Administrative Case Manager</td>
<td>Intake Coordinator</td>
</tr>
<tr>
<td>Advertising Sales Assistant</td>
<td>Intensive Case Manager</td>
</tr>
<tr>
<td>Assistant Teacher</td>
<td>Investigator First Grade Teacher</td>
</tr>
<tr>
<td>Behavior Support Assistant</td>
<td>IT Recruiter</td>
</tr>
<tr>
<td>Care Coordinator</td>
<td>Journalist</td>
</tr>
<tr>
<td>Case Manager</td>
<td>Life Skills Trainer</td>
</tr>
<tr>
<td>Case Worker</td>
<td>Mental Health Counselor</td>
</tr>
<tr>
<td>Clinical Research Assistant</td>
<td>Milieu Counselor</td>
</tr>
<tr>
<td>Counselor Advocate</td>
<td>Nursing Assistant</td>
</tr>
<tr>
<td>Crisis Clinician</td>
<td>Nutrition Counselor</td>
</tr>
<tr>
<td>Direct Care Counselor</td>
<td>Operations Analyst</td>
</tr>
<tr>
<td>Direct Support</td>
<td>Paraeducator (high school)</td>
</tr>
<tr>
<td>Drug and Alcohol Treatment Specialist</td>
<td>Para Therapist – Mercy Volunteer Corps</td>
</tr>
<tr>
<td>Educational Treatment Counselor</td>
<td>Patient Services Coordinator</td>
</tr>
<tr>
<td>Employment Specialist</td>
<td>Personal Care Assistant</td>
</tr>
<tr>
<td>Ensign – United States Navy</td>
<td>Pharmacy Technician</td>
</tr>
<tr>
<td>First Grade Teacher</td>
<td>Play Therapist Region II - Paskack Valley</td>
</tr>
<tr>
<td>Foreign Teacher</td>
<td>Preschool Teacher</td>
</tr>
</tbody>
</table>
Before discussing such topics as "Applying to Graduate School", it might be 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 total for the Ph.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, class attendance, etc. 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 four 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 have found rewarding work with a B.S. or some advanced study in a related area outside psychology. Some of the obvious avenues open are social work, special education, speech therapy, specialized counseling, hospital-related jobs, pharmaceutical research, and personnel work. Both sales and management careers require an ability to deal with people and their needs. See Section XII 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 some things 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 generally have more career choices open to them than masters' level psychologists in the same special area. They start at higher positions than those without advanced training.

Do you want a career with a good income? People with doctorates are usually hired at a higher salary than other people. Having a Ph.D. in academia as well as in industry or clinical practice usually insures at least an adequate income. (If the high cost of graduate school is deterring you from going on, then consider the money as an investment in your future with a high rate of return). Many students accepted to a doctoral program receive partial or total funding.

Finally, 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, you must realize you don't get something for nothing. The benefits of an advanced degree only come after more effort and application of yourself.

Attending graduate school does not guarantee that you will land a terrific job. There are many other factors which influence your life's course other than education. However, with all other things being equal, graduate school is the safest place to start towards a sound future.

**What Can I Do With a Doctorate?**

There are many opportunities available for the recipient of a doctorate. You may be involved in academia, research, pharmaceuticals, and, for those who pursue the clinical/counseling, private practice and public consultation.
What Can I Do With a Master's?

If one decides to terminate studies at the master's level, there are various options open. A majority of those who do not pursue a doctorate enter into the job market, possessing more mobility than the holder of a B.S. One job related to psychology which requires a master's is the school psychologist. Also, many holders of masters degrees pursue a career in industry, e.g., industrial/organizational psychology. Finally, much of the clinical work directly with clients is performed by psychological associates with the master's degree. However, 48 of the 50 states now require the doctorate for licensure as a psychologist.

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, the 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 or QPI) and your aptitude scores on the Graduate Record Examination (GRE: a glorified SAT). The implications are thus clear: maintain a high QPI and prepare thoroughly for the GREs.

The following is a table reflecting what doctoral graduate programs look for in undergraduate psychology coursework. As was the case with the survey reported earlier in relation to clinical/counseling doctoral programs specifically, 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!

*Two of our faculty members, Drs. John Norcross and Thomas Hogan, have created 12 modules on preparing and applying to graduate school. These modules are offered free of charge on the American Psychological Association (APA) website and provide essential information and indispensable guidance. Click on [www.apa.org/education/grad/application-video-series.aspx](http://www.apa.org/education/grad/application-video-series.aspx) to access the modules.*

<table>
<thead>
<tr>
<th>Course Prerequisites for Graduate Programs (N = 1,554)</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>

Survey research has investigated the importance accorded to the various 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.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Master's</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Letters of recommendation</td>
<td>2.74</td>
<td>.49</td>
</tr>
<tr>
<td>Personal statement/goals</td>
<td>2.63</td>
<td>.55</td>
</tr>
<tr>
<td>GPA</td>
<td>2.75</td>
<td>.43</td>
</tr>
<tr>
<td>Interview</td>
<td>2.30</td>
<td>.76</td>
</tr>
<tr>
<td>Research experience</td>
<td>2.04</td>
<td>.74</td>
</tr>
<tr>
<td>GRE scores</td>
<td>2.36</td>
<td>.66</td>
</tr>
<tr>
<td>Clinically related public service</td>
<td>1.94</td>
<td>.70</td>
</tr>
<tr>
<td>Work experience</td>
<td>1.91</td>
<td>.65</td>
</tr>
<tr>
<td>Extracurricular activity</td>
<td>1.46</td>
<td>.54</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 clinically-related service more heavily than doctoral programs.

Computer knowledge and skills are also valued highly by doctoral programs. For these and related reasons, we have integrated computer usage into our core curriculum and strongly encourage you to take Undergraduate Research in Psychology. Note also, as before, 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. It is important to note that the student has 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, curriculum vitae ("résumé"), and autobiographical sketch 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."
**How Do I Select A School?**

Some students place emphasis upon the location of the school; one person may prefer an urban location, while another may desire to attend a large, rural campus. It is all up to individual preference -- each type of campus has its advantages and disadvantages.

Another factor in determining selection is cost and financial aid. On the average, private schools are more expensive than state schools. The "in-state" vs. "out-of-state" cost difference that operates in undergraduate education is not as important in graduate education, however. That is because (a) once you begin study, you can establish residency there and pay in-state tuition after the first year, and (b) many financial aid deals include a tuition remission anyway. Graduate programs try to support their students with financial aid through work-study, teaching or research assistantships, fellowships (which are more scarce), loans, or some combination of the above. While the current economic climate for graduate aid is worse than it has been previously, there is still support available.

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

The following tables provide some information for both doctoral and master's level programs.

<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%(^a)</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%(^a)</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>

Recent Psychology Graduates are Attending Graduate School at:

- **Adelphi University**
  - MS, Clinical Mental Health Counseling (2016)

- **Alfred University**
  - MS School Psychology (2014)

- **Binghamton University**
  - MSW Social Work (2014)

- **Bucknell University**
  - MS (2015)

- **Caldwell University**
  - MA, Mental Health Counseling (2016)

- **Chestnut Hill College**
  - MA Clinical Psychology (2014)

- **Cleveland State University**
  - MA/Consumer & Industrial Psychology (2012)

- **Columbia University**

- **Duquesne Law School**
  - Law (2012)

- **Fordham University**
  - MA School Psychology (2013)
  - MS, Clinical Research Methodology (2016)

- **Georgian Court University**
  - MS, CAGS/NASP-Certified School (2013)

- **Immaculata University**
  - School Counseling (2012)

- **LaSalle University**
  - Pre-Speech Language Pathology (2014)

- **Loyola of Maryland**

- **Marymount University**
  - MS Clinical Mental Health Counseling (2014)
  - Psychology (2012)

- **Marywood University**
  - MA Mental Health Counseling (2013)
  - MA Psychology (2013)
  - Counseling (2012)

- **Montclair State University**
  - Certificate (2013)
  - MS, I/O Psychology (2015)

- **New York Institute of Technology**
  - MA, School Counseling (2016)

- **Northampton Community College**
  - Funeral Directing (2013)
  - Educational Psychology/Psychometrics (2012)

- **Penn State University**
  - MS Communication Sciences (2014)
  - MA, Counseling (2016)
  - MS and LPC/Mental Health Counseling (2014)

- **Philadelphia College of Osteopathic Medicine**
  - MS (2015)
  - MS, Physician Assistant (2016)

- **Queens College**
  - MS School Psychology (2013)

- **Rutgers University**
  - School Psychology (2012)
  - MS (2015)

- **Sacred Heart University**
  - MS Occupational Therapy (2014)

- **Silberman School of Social Work**
  - MSW Social Work (2013)

- **Spalding University**
  - PsyD Psychology (2014)

- **Teachers College Columbia University**
  - MS, School Psychology (2016)

- **Towson University**
  - School Psychology (2012)

- **Tulane University**
  - PhD Evolutionary Psychology (2017)

- **University of Baltimore**
  - MS Industrial Organizational (2014)

- **University of Minnesota**
  - PhD School of Psychology (2013)

- **University of Limerick, Ireland**
  - MS/Work and Organizational Psychology (2013)

- **University of Pennsylvania**
  - MS Criminology (2014)

- **University of Scranton**
  - MS Community Counseling (2012)
  - MS Secondary Education (2013)
**Modal Timeline**

This last 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—introduction, 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 in clinical settings.
5. Investigate various career choices.
6. Join psychology student organizations and become an active member.
7. Attend departmental colloquia and social gatherings.
8. Enroll in courses helpful for graduate school, including biological sciences, mathematics, writing, and public speaking.
9. Learn to use library and electronic resources, such as scholarly journals and PsycLit.
10. Consider participating in your university’s honors program, if you qualify.
11. Begin a career folder and place activities, honors, and other valuable reminders in it.
12. Discuss your career interests with faculty members and other mentors.

**Junior Year**

1. Take advanced psychology courses, for example, biopsychology, psychological testing.
2. Begin clinical work, both volunteer and practicum.
3. Volunteer for research with faculty and begin researching a potential honors thesis/independent project.
4. Continue contact with faculty and upperclassmen.
5. Enroll in professional organizations, for example, student affiliate of American Psychological Association or American Psychological Society.
6. Apply for membership in your local Psi Chi chapter.
7. Visit your career services office on campus and determine how the staff can assist you in applying to graduate school.
8. Draft a curriculum vitae to determine your strengths and weaknesses.
9. Attend a state or regional psychology convention.
10. Peruse graduate school bulletins online to acquaint yourself with typical requirements, offerings, and policies.
11. Surf the Web. Become comfortable with leading Web sites on graduate school admissions.
12. Access the GRE bulletin and information online. Begin preparation for the GRE by purchasing a study guide, attending a preparation course, and taking practice tests.
13. Update your folder by putting your curriculum vita/resume and reminders of your activities and accomplishments in it.
14. Try to focus your interests in particular research areas, theoretical orientations, and clinical populations.
15. Consider serving as an officer in one of the student organizations on campus.
16. Meet with your advisor or mentor before summer to review your plan for graduate applications.

**Application Year**

**June–August**

1. Continue to acquire research competencies and clinical experiences.
2. Surf the Web and begin to gather information from program Web sites.
3. Begin to narrow down potential schools to 20–40.
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 program Web sites and/or write to schools for applications.
2. Receive information packets and read through them.
3. Consult with advisors regarding graduate programs, application procedures, faculty of interest, etc.
4. Continue to study diligently for the GREs.
5. Update your curriculum vitae.
6. Investigate possible financial aid opportunities.
8. 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 using the worksheets.
4. Record the deadlines for submitting each application.
5. Choose the faculty at each school that most interest you.
6. Research your area of interest, focusing on the work of faculty with whom you would like to work.
7. Write to graduate faculty expressing interest in their work (if appropriate).
8. Request a copy of your own transcript and inspect it for any errors or omissions.
9. Begin first drafts of your personal statement and get feedback on it.
10. Update your CV or resume.
11. Calculate costs of applications and admission interviews and acquire the money for them.
12. Finalize the decision on whom you will ask for letters of recommendation.
13. Formulate your Plan B (i.e., what you will do if you are not accepted into a doctoral program).

October–November

1. Take the GRE Psychology Subject Test.
2. Take the MAT (only if necessary).
3. Prepare packets to distribute to your recommenders, including a complete vitae or resume.
4. Request letters of recommendation.
5. Arrange for the registrar to send your transcripts to schools.
6. Gather information on financial aid and loans available to graduate students.
7. Finalize your personal statements.

November–December

1. Complete applications.
2. Maintain a photocopy of each application for your records.
3. If the opportunity arises, visit professors with whom you have been in contact.
4. Submit applications.
5. Verify that the applications and all necessary materials have been received.
6. Request ETS forward your GRE scores to the appropriate institutions.

January–March

1. Wait patiently.
2. Insure 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 if not accepted into any programs.
April–May

1. If other programs make early offers, contact your top choices to determine the current status of your application.
2. Accept an offer of admission and promptly turn down less-preferred offers.
3. Finalize financial aid arrangements for next year.
4. Send official transcripts with Spring term grades to the program you plan to attend.
5. If not accepted to any schools, refer to Chapter 8.
6. Celebrate (if accepted) or regroup (if not accepted).
7. Inform people who wrote you letters of recommendation of the outcome.

XIV. 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 the standard University of Scranton letter of recommendation form:

<table>
<thead>
<tr>
<th>Academic performance</th>
<th>Judgment/common sense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>Interpersonal skills</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></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.

1) **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.

2) **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).

3) **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. Only those who qualify as a sophomore or above will be invited to join.

4) **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.

5) **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*. See your advisor for applications.

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

### XV. Recommended Readings


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

### XVI. 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 letters written over the past three years produced the following list of frequent advice from those who have already "been there and done that." Prevailing advice centered on becoming involved in student organizations, cultivating study skills, securing research experience, and living college to its fullest. Heed these sage recommendations from your peer advisors!
Most Frequent Advice Rendered by Graduating Psychology Majors in their Letters

<table>
<thead>
<tr>
<th>Advice/Recommendation</th>
<th>Frequency</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get involved in psychology student organizations</td>
<td>62</td>
<td>5.6</td>
</tr>
<tr>
<td>Cultivate good study skills</td>
<td>51</td>
<td>4.6</td>
</tr>
<tr>
<td>Secure research experience</td>
<td>46</td>
<td>4.2</td>
</tr>
<tr>
<td>Follow advice about Research Methods course</td>
<td>45</td>
<td>4.1</td>
</tr>
<tr>
<td>Enjoy it/Live college to the fullest</td>
<td>44</td>
<td>4.0</td>
</tr>
<tr>
<td>Other/assorted advice</td>
<td>43</td>
<td>3.9</td>
</tr>
<tr>
<td>Seek help of psychology faculty</td>
<td>42</td>
<td>3.8</td>
</tr>
<tr>
<td>Get to know your professors</td>
<td>41</td>
<td>3.7</td>
</tr>
<tr>
<td>Become involved in university life</td>
<td>41</td>
<td>3.7</td>
</tr>
<tr>
<td>Prepare for graduate school</td>
<td>39</td>
<td>3.6</td>
</tr>
<tr>
<td>Realize fellow students can help</td>
<td>33</td>
<td>3.0</td>
</tr>
<tr>
<td>Manage your stress</td>
<td>30</td>
<td>2.7</td>
</tr>
<tr>
<td>Balance academic and social life</td>
<td>27</td>
<td>2.5</td>
</tr>
<tr>
<td>Understand program requirements</td>
<td>25</td>
<td>2.3</td>
</tr>
<tr>
<td>Explore other areas/minors</td>
<td>24</td>
<td>2.2</td>
</tr>
<tr>
<td>Maintain personal motivation</td>
<td>24</td>
<td>2.2</td>
</tr>
<tr>
<td>Remember that the Psyc courses will be difficult</td>
<td>23</td>
<td>2.1</td>
</tr>
<tr>
<td>Never hesitate to ask questions</td>
<td>21</td>
<td>1.9</td>
</tr>
<tr>
<td>Obtain practical experience</td>
<td>20</td>
<td>1.8</td>
</tr>
<tr>
<td>Choose classes related to your expected career</td>
<td>19</td>
<td>1.7</td>
</tr>
<tr>
<td>Seek advice of psychology advisors</td>
<td>19</td>
<td>1.7</td>
</tr>
<tr>
<td>Select switch advisors you get along with</td>
<td>19</td>
<td>1.7</td>
</tr>
</tbody>
</table>

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

1. What courses can go into your free elective?
2. What is the **minimum** number of core eight psychology courses that are required for a major?
3. When is the earliest a student can get involved in research?
4. What are the requirements for taking Undergraduate Research in Psychology for academic credit?
5. When should a student interested in going immediately on to graduate school take the GREs?
6. Can a combination of two elective psychology labs or advanced topics seminars take the place of one 3-credit elective?
7. How many credits should a student carry when taking Research Methods?
8. When should a student interested in graduate school start sending away for information and applications?
9. Beyond the field experiences courses, how can I obtain applied experiences in my field?
10. Is it necessary to do research for course credit?
11. Must I take a psychology course with the corresponding lab?
12. Can psychology majors get written into psychology classes that are closed?
13. How can students change courses after leaving registration?
14. Which psychology elective courses are most appropriate for someone with my interests?
15. Are there limits on the number of Special Topics courses I may take?
16. What are the three student organizations in the psychology department?