

2023 - 2024 PSYCHOLOGY HANDBOOK

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I. Preface

A warm welcome to Scranton's Psychology Department!

This *Handbook* was written for you, the University of Scranton psychology student, to provide information on the department, to clarify curriculum offerings, and to feature the exciting opportunities in psychology. This document was designed to be read in conjunction with our Psychology website at www.scranton.edu/academics/cas/psychology/

As faculty advisors, we find that students ask 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.

The ultimate objective of the University of Scranton's *Psychology Handbook* and the 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 origin of *student*, which is *studere*, meaning to be zealous, to aspire, to desire. In short, to catch the fever of psychology!

We would like to thank the many people who have assisted in the preparation of this *Handbook* over the decades. We publicly thank the American Psychological Association, Dr. Joseph Palladino, the National Research Council, National Center for Education Statistics, and Guilford Press for their permission to reproduce published material. We are grateful to the late Dr. James Buchanan who maintained the *Handbook* for 20+ years. We are indebted to the psychology faculty and to the countless psychology students who have shared their experiences with us.

Now, let's jump into the excitement and opportunities of Psychology at the University of Scranton...



The full-time psychology faculty at the University of Scranton

II. The Psychology Department

The University of Scranton Psychology Department is proud of the 5 major components of a quality education: curriculum, faculty, students, facilities, and outcomes.

Curriculum

The Psychology major has been carefully designed to give students a balanced education in the discipline and the widest range of career options, from baccalaureate employment to graduate training in prestigious universities. In fact, 35 years of post-graduation data reveal that half of our psychology majors immediately enter graduate school and half proceed directly to full-time employment.

We help students tailor their education to their own needs and interests. For two examples, students interested in marketing, personnel, or industrial-organizational psychology may elect a business minor. Psychology majors interested in clinical careers frequently take minors in Human Services and Sociology/Criminal Justice.

We strongly recommend that psychology majors graduate with a concentration and/or a minor. This optimizes your employment possibilities, structures your 30 free-area credits, enhances your internship and employment prospects, and tailors college to your career goals.

The Psychology Department co-manages the Neuroscience Program with the Biology Department. In addition, psychology faculty coordinate 3 interdisciplinary concentrations: Lifespan Development, Environmental and Sustainability Studies, and Integrative Data Analysis. (These Concentrations are outlined in Section V.)

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

Faculty

Our 11 full-time faculty all hold doctoral degrees in psychology and are actively involved in research spanning the discipline: clinical, cognitive, developmental, educational, evolutionary, forensic, industrial-organizational, learning, physiological, perception, and social. In addition to their teaching commitments, faculty members supervise research, publish regularly, review for journals, and coordinate grants.

The teaching and advising of Scranton's psychology faculty are exclusively devoted to undergraduates. We have chosen not to offer graduate psychology degrees so that we may focus solely on teaching and mentoring undergraduates.

Additional information on the faculty is provided in Section III of this *Handbook* and on the psychology website (www.scranton.edu/academics/cas/psychology/).

Students

Our Psychology majors are cohesive, energetic, and social. They sponsor and lead 3 departmental student organizations: the Psychology Club, Psi Chi, and the Association for Psychological Science Student Caucus.

- The Psychology Club is open to any university student interested in psychology. Annual events include a Welcome Back BBQ and community service projects.
- Psi Chi is the International Honor Society in Psychology with chapters in 1,250+ universities. Each year Psi Chi organizes an initiation dinner and a trip to a regional convention.
- Our local chapter of APSSC promotes critical thinking and discussion of topics related to psychology. It frequently meets with and cosponsors events with the Psychology Club.

2023 – 2024 Student Organization Officers

Psychology Club	Psi Chi
President – Emma Trautfetter	President – Elise Koegler
Vice President – My Kim Dang	Vice President – Emma Trautfetter
Treasurer – Elise Koegler	Secretary – Owen Stanczak
Secretary – Kelsey Torres	

Facilities

The department has over 6,100 square feet of dedicated research space across Alumni Memorial Hall (AMH), Loyola Science Center (LSC), and the Institute for Molecular Biology and Medicine (IMBM). This includes computer-based laboratories for biopsychology, developmental, clinical, forensic, information processing, psycholinguistic, and social psychology research.

Environmentally controlled animal facilities, neuroscience laboratories, and the Human Electrophysiology (HEP) Lab are housed in LSC. A large research suite for child developmental research and a forensic psychology lab are housed in IMBM.

Psychology is at the forefront of computer applications. We have more than 50 Pentium-based computers connected through a high-speed network to the University's main computer, laser and color printers, and other input/output devices. This network allows ready access to word processing, statistical packages, computer-assisted instruction, graphics, data analysis, and library research.

The Psychology Department in AMH features two computer-mediated classrooms and two mediated seminar rooms.

Outcomes

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 2023, psychology majors rated the overall program an average of 3.62 (using the 4.0 GPA format) and the quality of teaching in psychology a 3.48, higher than the average for teaching in their other University courses.

- A notable proportion of our graduates go on to Ph.D. programs in psychology. Research at Franklin and Marshall College shows that, over the last decade for which data were analyzed, the University of Scranton ranked 24th out of 254 comparable four-year, private institutions as the baccalaureate source of Ph.D.s in Psychology.
- Our students' knowledge of psychology is well above the national average. This is reflected in their performance on the ETS Major Field Achievement Test in Psychology. Compared to other institutions, Scranton students score at the 75th percentile on psychology knowledge.
- Psychology majors continue to conduct and present research at a significant rate. In the 2021-2022 academic year, for example, 18 psychology and neuroscience undergraduates co-presented a paper/poster with psychology faculty members.
- An indirect measure of instructional and faculty quality are awards bestowed by independent bodies. Dr. John Norcross was honored as the Pennsylvania Professor of the Year by the Carnegie Foundation. Drs. Bryan Burnham, Christie Karpiak, Jessica Nolan, and Jill Warker each received Provost's Teaching Awards in recent years.

In Sum: What Makes Scranton Psychology Distinctive

- Obtain state-of-the-art training in the foundations of psychology while tailoring electives to your career goals.
- Conduct and present research with psychology faculty at rates far exceeding national norms.
- Take for-credit internships in either clinical (e.g., hospitals, addiction centers, schools) or non-clinical settings (e.g., speech pathology, personnel offices).
- Pursue your interests: Half of psychology majors immediately attend graduate school, while the other half enter the workforce in virtually every industry.
- Serve as a teaching assistant (more than a third of psychology majors do so).
- Join the 3 psychology student organizations for fun and leadership opportunities.
- Enjoy small classes, personal advising, and a career development seminar.
- Experience Jesuit education, which emphasizes care of the whole person.



III. The Faculty

All 11 full-time psychology faculty occupy offices on the second floor of Alumni Memorial Hall (AMH). Please consult the Psychology webpage and the individual faculty's webpage for office hours and contact information.

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

Anthony E. Betancourt, Ph.D.

Dr. Betancourt received his baccalaureate from the University of Scranton, his master's degree from Fairleigh Dickinson University, and his doctorate in educational psychology from the City University of New York, Graduate Center. He teaches Psychological Testing and Career Development in Psychology. His research interests include bullying, emotional intelligence, and addressing disparities in educational outcomes. Representative research:

Betancourt, A. C. (2020). *Understanding gender differences in traditional and cyberbullying*. ProQuest Dissertations & Theses Global. Retrieved from www.proquest.com/dissertations-theses/understanding-gender-differences-traditional/docview/2456432364/se-2?accountid=7287.

Betancourt, A. C. (2016). Do cyber victimization and traditional victimization form separate factors? Evidence from a preliminary study. *International Journal of Information and Educational Technology*, 6, 296–300.

Burrus, J., Elliott, D., Brennenman, M., Markle, R., Carney, L., Moore, G., Betancourt, A., Jackson, T., Robbins, S., Kyllonen, P., & Roberts, R. D. (2013). Putting and keeping students on track: Toward a comprehensive model of college persistence and goal attainment. *ETS Research Report Series*, 2013(1), 1-61.

Bryan R. Burnham, Ph.D.

Dr. Burnham received his baccalaureate from Syracuse University and his doctorate in experimental and cognitive psychology/science from the University at Albany (SUNY). 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:

Burnham, B. R. (2018). Selection and response bias as determinants of priming of popout search: Revelations from diffusion modelling. *Psychonomic Bulletin & Review*, 25, 2389-2397.

Burnham, B. R., *Sabia, M., & *Langan, C. (2014). Components of working memory and visual selective attention. *Journal of Experimental Psychology: Human Perception & Performance*, 40, 391-403.

Burnham, B. R. (2013). Analysis of response time distributions support top-down attentional control affecting early perceptual selection. *Attention, Perception & Psychophysics*, 75, 257-277.

Burnham, B. R., *Rozell, C. A., Kasper, A., *Bianco, N. E., & *Delliturri, A. (2011). The visual hemifield asymmetry in the spatial-blink during singleton search and feature search. *Brain & Cognition*, 75, 261-272.

Burnham, B. R. (2010). Cognitive load modulates attentional capture by color singletons during effortful visual search. *Acta Psychologica*, 135, 50-58.

Emily J. Hopkins, Ph.D.

Dr. Hopkins earned her bachelor's degree in cognitive neuroscience from Brown University and her master's and Ph.D. in psychology from the University of Virginia. She completed postdoctoral fellowships at the University of Pennsylvania and Temple University. Her research focuses on the role of play and fictional media in early childhood, particularly in how play and stories can be used as educational tools. Dr. Hopkins teaches Research Methods & Statistics, Fundamentals of Psychology, and Lifespan Development courses. Representative research:

Hopkins, E. J., & Lillard, A. S. (2021). *The Magic School bus dilemma: How fantasy affects children's learning from stories*. Manuscript accepted for publication.

Hopkins, E. J., & Weisberg, D. S. (2021). Investigating the effectiveness of fantasy stories for teaching scientific principles. *Journal of Experimental Child Psychology*, 203, 15047.

Weisberg, D. S., & Hopkins, E. J. (2020). Preschoolers' extension and export of information from realistic and fantastical stories. *Infant and Child Development*, 29, e2182.

Hopkins, E. J., Toub, T. S., Hassinger-Das, B., Golinkoff, R. M., & Hirsh-Pasek, K. (2019). Playing for the future: Redefining early childhood education. In D. Whitebread et al. (Eds.), *SAGE Handbook of Developmental Psychology and Early Childhood Education*. SAGE.

Hopkins, E. J., Dore, R. A., & Lillard, A. S. (2015). Do children learn from pretense? *Journal of Experimental Child Psychology*, 130, 1-18.

Christie P. Karpiak, Ph.D.

Dr. Karpiak earned her baccalaureate, master's degree, and doctorate from the University of Utah, and completed her clinical internship at the University of North Carolina Medical Center. She teaches Psychopathology, Child Psychopathology, Child Clinical Psychology, and the Senior Seminar. 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 research:

Voltzow, J., Mulhall, D., Conniff, B., Muir, S., & Karpiak, C. (2023). *Transforming STEM in Northeastern Pennsylvania*, NSF 1741994, \$645,814. Grant period 4-1-18 to 3-1-23.

Lenway, A.* & Karpiak, C. P. (2022, March). *An investigation into retention of under-represented students in STEM majors*. Poster presented at the annual meeting of the Eastern Psychological Association, New York.

Karpiak, C. P., Golden, J.*, Goldschlager, J.*, & Rebolledo, L.* (2021, August). *Rapid response and PCIT outcome in a community setting*. Poster presented at the annual meeting of the American Psychological Association, San Diego (virtual).

Coviello, C.*, Long, E.*, Golden, J.*, Wolff, C., Karpiak, C., & Goldschlager, J.* (2020, June). *PCIT in a community treatment setting: Early engagement and patterns of change*. Presented at the annual meeting of the Eastern Psychological Association (virtual).

Karpiak, C. P. (2019) with Spilis, M. *Treatment of psychological disorders: A six-unit lesson plan for high school psychology teachers*. American Psychological Association.

Barry X. Kuhle, Ph.D.

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

- Kuhle, B. X., *Beck, W. C., *Dzieza, A. E., *Lavelle, K. D., & *Piranio, A. M. (2018, July). *To swipe left or right? Sex differences in Tinder profiles*. Poster presented at the Human Behavior and Evolution Society, Amsterdam, Netherlands.
- Kuhle, B. X. (2015). On the origin of an evolutionary psychologist. *Academic advising: A Handbook for advisors and students* (volume 2). Society for the Teaching of Psychology.
- Kuhle, B. X., Melzer, D. K., *Cooper, C. A., *Merkle, A. J., *Pepe, N. A., *Ribanovic, A., *Verdesco, A. L., & *Wettstein, T. L. (2015). The “birds and the bees” differ for boys and girls: Sex differences in sex talks. *Evolutionary Behavioral Sciences*, 9, 107-115.
- Kuhle, B. X., & Radtke, S. (2013). Born both ways: The alloparenting hypothesis for sexual fluidity in women. *Evolutionary Psychology*, 11, 304-323.
- 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. She teaches Social Psychology, Environmental & Conservation Psychology, Psychology of Diversity, and Industrial/Organizational Psychology. 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:

- Nolan, J. M. (2021). Social norm interventions as a tool for pro-climate change. *Current Opinion in Psychology*, 42, 120-125..
- Nolan, J. M., & *Tobia, S. (2019). Public support for global warming policies: Solution framing matters. *Climatic Change*, 154, 1-17.
- Nolan, J. M. (2017). Environmental policies can buttress conservation norms. *Society & Natural Resources*, 30, 228-244.
- Nolan, J. M. (2015). Social norms and their enforcement. In S. Harkins & K. Williams (Eds.), *Oxford Handbook of social influence*. Oxford University Press.
- Nolan, J. M. (2014). Using Jackson’s Return Potential Model to explore the normativeness of recycling. *Environment & Behavior*, 47, 835-855.

John C. Norcross, Ph.D.

Dr. Norcross received his baccalaureate from Rutgers University, earned his master's and doctorate in clinical psychology from the University of Rhode Island, and completed his clinical internship at the Brown University School of Medicine. He is a board-certified clinical psychologist. He teaches Career Development in Psychology, Clinical Psychology, Field Experience in Clinical Settings, and the Senior Seminar II. His research interests center on psychotherapy, clinician self-care, therapy relationships, and admission to graduate school. Representative research:

- Norcross, J. C., & Sayette, M. A. (2024). *Insider's guide to graduate programs in clinical and counseling psychology*. (2024/25 edition). Guilford.
- Norcross, J. C., & Cooper, M. (2021). *Personalizing psychotherapy: Assessing and accommodating patient preferences*. American Psychological Association.
- Norcross, J. C., & Goldfried, M. R. (2020). (Eds.). *Handbook of psychotherapy integration* (3rd ed.). Oxford University Press.
- Norcross, J. C., & Lambert, M. J. (Eds.). (2019). *Psychotherapy relationships that work* (3rd edition). Oxford University Press.
- Norcross, J. C., & VandenBos, G. R. (2019). *Leaving it at the office: A guide to psycho-therapist self-care* (2nd edition). Guilford.

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:

- *Milewski, T. M., & Orr, P. T. (2018). Acetaminophen disrupts memory in object recognition and increases extracellular signal-regulated kinase phosphorylation in male mice. *Behavioral Neuroscience*, *132*, 580.
- Fortress, A. M., Fan, L., Orr, P. T., Zhao, Z., & Frick, K. M. (2013). Estradiol-induced object recognition memory consolidation is dependent on activation of mTOR signaling in the dorsal hippocampus. *Learning and Memory*, *20*, 147-155.
- Evans, D. W., Orr, P. T., Lazar, S. M., et al. (2012). Human preferences for symmetry: Subjective experience, cognitive conflict, and cortical brain activity. *PLoS One*, *7*, e38966
- Orr, P. T., Rubin, A. J., Fan, L., et al. (2012). The progesterone-induced enhancement of object recognition memory consolidation involves activation of the extracellular signal-regulated kinase in the dorsal hippocampus. *Hormones and Behavior*, *61*, 487-495.
- Orr, P. T., Lewis, M. C., & Frick, K. M. (2009). Dorsal hippocampal progesterone infusions enhance object recognition memory in young female mice. *Pharmacology, Biochemistry, and Behavior*, *93*, 177-182.

Joshua J. Reynolds, Ph.D.

Dr. Reynolds received his bachelor's degree at Southern Oregon University, his master's degree in forensic psychology at the University of North Dakota, and his doctorate in experimental psychology at the University of Wyoming. He teaches Research Methods and Statistics as well as Forensic Psychology. His research uses multidisciplinary theory to study homicide, rape, exploitative and deceptive strategies, self-control, jury decision making, police legitimacy, and fourth amendment interactions. Representative research:

- Reynolds, J. J., & McCrea, S. M. (2019). Environmental constraints on the functionality of inhibitory self-control: Sometimes you should eat the donut. *Self and Identity, 18*, 60-86.
- Reynolds, J. J., Estrada-Reynolds, V. C., & Nunez, N. (2018). Development and validation of the attitudes towards police legitimacy scale. *Law and Human Behavior, 42*, 119-134.
- Reynolds, J. J., & McCrea, S. M. (2017). Spontaneous violent and homicide thoughts in four homicide contexts. *Psychiatry, Psychology and Law, 1-23*.
- Reynolds, J. J., & McCrea, S. M. (2016). The dual component theory of inhibition regulation: A new model of self-control. *New Ideas in Psychology, 41*, 8-17.
- Reynolds, J. J., & McCrea, S. M. (2015). Exploitative and deceptive resource acquisition strategies: The role of life history strategy and life history contingencies. *Evolutionary Psychology, 13*.

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. She was a postdoctoral fellow in the Elderly Care Research Center at Case Western Reserve University. She teaches Lifespan Development and Psychology of Women. 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:

- Slotterback, C. S. (2009). *The psychology of Santa*. Nova Science.
- Slotterback, C. S. (2009, April). *The psychology of Santa*. Paper presented to Institute for Public Policy & Economic Development, Marywood University, Dunmore, PA.
- Slotterback, C. S., & *Bailey, N. M. (2002, June). *On being old: Attitudes of older and young adults compared to children*. Poster presented to American Psychological Society, New Orleans, LA.
- Slotterback, C. S., & *Brolan, J. M. (2002, June). *A four-year study of letters to Santa: Impact of societal changes*. Poster presented at the American Psychological Society, New Orleans, LA.

Jill A. Warker, Ph.D.

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

Fischer-Baum, S., Warker, J. A., & Holloway, C. (2021). Learning phonotactic-like regularities in immediate serial recall. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *47*, 129-146.

Ivanova, I., Wardlow, L., Warker, J. A., & Ferreira, V. S. (2017). The effect of anomalous utterances on language production. *Memory & Cognition*, *45*, 308-319.

Warker, J. A., & Dell, G. S. (2015). New phonotactic constraints learned implicitly by producing syllables generalize to the production of new syllables. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *41*, 1902-1910.

Gaskell, M. G., Warker, J. A., Lindsay, S., Frost, R., Guest, J., Snowdon, R., & Stackhouse, A. (2014). Sleep underpins the plasticity of language production. *Psychological Science*, *25*, 1457-14.

Warker, J. A. (2013). Investigating the retention and time-course of phonotactic learning from production experience. *Journal of Experimental Psychology*, *39*, 96-109.

Part-Time Psychology Faculty

John J. O'Malley, Ph.D., Professor Emeritus
Michael Oakes, Ph.D.
Carl J. Schuster, Ph.D.

Katy Sulla, M.A.
Tyshawn Thompson, Psy.D.
Elizabeth Vento, Ph.D.



IV. The Curriculum

The Psychology Major

Psychology majors take the following courses:

- Fundamentals of Psychology (PSYC 110)
- Research Methods & Statistics I (PSYC 211)
- Research Methods & Statistics II (PSYC 212)
- Career Development Seminar in Psychology (PSYC 390)
- Senior Seminar in Psychology I & II (PSYC 490 & 491)

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

Social-Developmental Processes

- Social Psychology (PSYC 220)
- Lifespan Development: Social & Emotional (PSYC 227)

Individual Processes

- Personality and Individual Differences (PSYC 224)
- Psychopathology (PSYC 225)

Physiological Processes

- Sensation and Perception (PSYC 230)
- Behavioral Neuroscience (PSYC 231)

Learning Processes

- Cognitive Psychology (PSYC 234)
- Learning & Behavior (PSYC 235)

We recommended that psychology majors complete one course from each of the preceding groups by the completion of their fifth psychology elective.

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

Psychology Electives

- Lifespan Development (PSYC 226)
- 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)
- Psychology of Racism (PSYC 242)
- Special Topics in Psychology (PSYC 284 and 384)
- Multivariate Statistics (PSYC 310)
- Child Psychopathology (PSYC 325)
- Couple and Family Therapy (PSYC 334)
- Psychological Testing (PSYC 335)
- Psychopharmacology (PSYC 339)

The Psychology Curriculum

		Fall Cr.	Spr. Cr.
First Year			
MAJOR	PSYC 110 - (S) Fundamentals of Psychology - PSYC. Elective	3	3
GE EP	PSYC 140 – (FYOC/FYDT) Current Topics in Psychological Science	3	
GE QUAN	MATH 106, 109, or 114 - Mathematics	3	
GE S/BH	S/BH ELECT		3
GE WRTG	WRTG 107 - (FYW) Composition		3
GE HUMN	HUMN ELECT - Humanities Elective		3
GE PHIL	PHIL 120 - Introduction to Philosophy – PHIL 210 - Ethics	3	3
GE FSEM	First Year Seminar (FYS)		
		12	15
Second Year			
MAJOR	PSYC 211 – Research Methods and Statistical Analysis I	4	
MAJOR	PSYC 212 – (EPW) Research Methods and Statistical Analysis II		4
MAJOR	ELECT - Psychology Electives	3	3
GE ELECT	FREE ELECT		3
GE NSCI	NSCI ELECT - Elective- Elective	3	3
GE S/BH	S/BH ELECT - Soc/Beh Science Elective	3	
GE HUMN	HUMN ELECT - Humanities Elective	3	
		16	13
Third Year			
MAJOR	MAJOR ELECT - Psychology Electives	6	9
MAJOR	PSYC 390 - Career Development in Psychology	1	
GE ELECT	ELECT- Elective	3	
GE HUMN	HUMN ELECT - Humanities Electives	3	3
GE T/RS	T/RS 121 - (P) Theology I: Introduction to the Bible	3	
GE T/RS	T/RS 122 - (P) Theology II: Introduction to Christian Theology		3
		16	15
Fourth Year			
MAJOR	MAJOR ELECTIVE - Psychology Elective	3	
MAJOR	PSYC 490 – Senior Seminar in Psychology I	1.5	
MAJOR	PSYC 491 - (EPW) Senior Seminar in Psychology II		1.5
GE PHIL/T/RS	PHIL ELECT- Philosophy or T/RS ELECT - T/RS Elective	3	
GE ELECT	FREE ELECT - Free Electives	9	15
		16.5	16.5

Total: 120 Credits

V. Psychology as a Major

As a major, psychology provides a unique educational experience of quality, breadth, and flexibility. Psychology constitutes a “hub” or “core” discipline, traversing the traditional distinctions among natural sciences, behavioral sciences, and the liberal arts/humanities.

U.S. Department of Education studies reveal that psychology is the third or fourth most popular undergraduate major. Approximately 135,000 baccalaureate degrees are awarded each year in psychology throughout the United States.

Preparing for your Future

Scranton’s Psychology program prepares you for a future in employment, graduate school or both. In fact, half of our graduates with a B.S. in psychology immediately enter full-time employment and half immediately enter graduate school.

Surveys of human service agencies within the Commonwealth of Pennsylvania indicate the need for baccalaureate-level job candidates. For entry-level positions, 96% of these facilities hire baccalaureate graduates who comprise, on the average, 46% of the staff.

But psychology majors are not limited to human service or mental health positions. Dozens of studies have found that psychology majors are frequently employed in business, research, and industry, including management, personnel, public relations, and sales. Many of our students enter these and related fields. Section XII of this *Handbook* details the variety of careers available to students with a bachelor's degree in psychology.

Historically, Scranton’s Psychology Department has produced a large number of students who enter graduate training. In fact, we rank in the top 10% of comparable institutions nationally in terms of students who go on to earn doctorates in psychology. The majority of these students have received funded assistantships and other forms of financial support.

Section XIII of this *Handbook* presents graduate school opportunities in greater detail. Graduate programs, regardless of specialization, are interested in undergraduates who are well prepared in our “core eight” courses and possess research experience.

Psychology Career Paths

Psychology is a diverse and evolving discipline. Our curriculum provides a broad and solid foundation while simultaneously enabling you to personalize to your interests and goals. Once you chose a particular specialty, you can use the recommended courses below for focused training. 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 baccalaureate-level employment or graduate training in clinical, counseling, and school psychology. They would also be good preparation for those considering entry into clinical social work, mental health counseling, applied behavioral analysis, and couple/family therapy. These recommended courses provide a firm grounding in psychopathology, interviewing skills, clinical assessment, and psychological treatment. In their junior or senior year, students complete for academic credit a supervised field experience in the community for hands-on experience. Students interested in this area are encouraged to take Behavioral Neuroscience (PSYC 231). The first four courses are presented in the *general* order in which they should be taken.

- (1) Psychopathology (PSYC 225; Freshman or Sophomore year)
- (2) Clinical Psychology (PSYC 360; Fall of Junior year)
- (3) Psychological Testing (PSYC 335; Junior or Senior year)
- (4) Field Experience in Clinical Settings (PSYC 480; End of Junior year or Senior)
- (5) One course from the following list: (Junior or Senior Year)
 - Addictions (HS 421—Don't worry about the number, it has no prerequisites)
 - Child Psychopathology (PSYC 325)
 - Behavior Modification (PSYC 363)
 - Couple and Family Therapy (PSYC 334)
 - Cognitive-Behavior Therapy (PSYC 361)
 - Case Management and Interviewing (HS 241)
 - Child Clinical Psychology (PSYC 362)
 - Health Psychology (PSYC 228)

An indication of the courses that graduate schools in clinical/counseling psychology are seeking can be seen in the following table. These data are based on a study of 217 APA-accredited 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:

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

Source: Norcross, Sayette, Stratigis, & Zimmerman (2017).

Industrial-Organizational or Personnel Psychology

Many psychology students find themselves interested in consumer, human factors, personnel, or industrial-organizational psychology. For these students, a business minor is strongly recommended. I/O Psychology (PSYC 236), Psychological Testing (PSYC 335), and Field Experience in Applied Settings (PSYC 481) are also strongly suggested.

Biopsychology/Physiological Psychology

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

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 psychology'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.

- (1) General Biology (BIOL 141 & 142)
- (2) Behavioral Neuroscience with lab (PSYC 231 & 231L)
- (3) General and Analytical Chemistry (CHEM 112 & 113)
- (4) Psychopathology (PSYC 225)
- (5) Cognitive Neuroscience (PSYC 350)
- (6) Two of the following with their accompanying labs:
 - Sensation and Perception (PSYC 230)
 - Learning & Behavior (PSYC 235)
 - Cognitive Psychology (PSYC 234 & 234L)

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

Cognitive Psychology

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

- (1) Cognitive Psychology (PSYC 234)
- (2) Sensation and Perception (PSYC 230)
- (3) Behavioral Neuroscience & Lab (PSYC 231)
- (4) Psychology of Language (PSYC 232)
- (5) Cognitive Neuroscience (PSYC 350)
- (6) Computer Science I (CMPS 134)
- (7) Logic (PHIL 215)



Related Academic Programs

Minors, concentrations, and double majors outside of the psychology program are possible and frequently desirable. Most minors and concentrations can be combined with a psychology major by adding few, if any, additional courses due to our large free area. This requires careful planning and two advisors, one in each program, to ensure that requirements are met.

Psychology faculty coordinate 3 interdisciplinary concentrations: Lifespan Development (Dr. Slotterback coordinator), Environmental and Sustainability Studies (Dr. Nolan coordinator), and the Integrated Data Analysis (Dr. Orr coordinator). Below we outline the mission and requirements of these 3 concentrations.

Lifespan Development Concentration

This 27-credit interdisciplinary concentration requires few courses beyond those associated with the psychology major, particularly if you follow the recommended courses for students interested in clinical/counseling psychology. The concentration enables students to develop a multi-disciplinary focus on human development across the lifecycle. It aims to provide an understanding of both normal and exceptional development of humans as biological, psychological, and social organisms. The capstone component of the concentration is a field experience.

The concentration requires the following:

1. PSYC 226 – (S) Lifespan Development: Cognitive & Biological
2. PSYC 227 – (S) Lifespan Development: Social & Emotional
3. PSYC 225 (Psychopathology)

4. One of the following courses:

PSYC 360 (Clinical Psychology)

CHS 242 (Counseling Theories)

SOC 115 (Introduction to Social Work)

HADM 110 (Introduction to Gerontology)

HADM 211 (Health Administration)

OT 440 (Management and Supervision of Occupational Services)

NURS 472 (Advanced Nursing Concepts)

5. One of the following in the Human Biology group:

BIO 100 (Modern Concepts of Human Biology)

BIO 104 (Anatomy, Physiology, and Health)

BIO 110 or 111 (Human Anatomy & Physiology)

BIOL 142 (Human Biology)

BIO 202 (ABC's of Genetics)

BIO 205 (Human Sexuality & Reproduction)

PSYC/NEUR 231 (Behavioral Neuroscience)

6. One of the following in the Cultural Diversity group:

CHS 333 (Multiculturalism in Counseling and Human Services)

CHS 337 (Counseling Girls and Women)

CHS 338 (Poverty, Homelessness, and Social Justice)

CHS 339 (Counseling Boys and Men)

CHS 375 (Counseling LGBT Persons)

EDUC 142 (Exceptional Lives)

EDUC 256 (Family, School & Community Relations in a Diverse Society)
 HADM 216 (Aging & the Community)
 HADM 218 (Health & Aging)
 GERO 220 (Crime & Aging)
 HADM 232 (Aging & Death)
 HADM 315 (Cultural Diversity and Health Administration)
 PSYC 238 (Psychology of Women)
 PSYC/HD 325 (Exceptional Child)
 PSYC 364 (Psychology of Diversity)
 SOC 210 (Marriage and Family)
 SOC 220 (Social Stratification)
 SOC 224 (Race and Ethnic Relations)
 SOC 234 (Cultural Anthropology)
 SOC 315 (Feminism and Social Change)

7 & 8. Two of the following in the Applied Skills group:

CHS 241 (Case Management)
 CHS 322 (Cognitive Disabilities)
 CHS 325 (Psychosocial Aspects of Eating Disorders)
 CHS 331 (Health & Behavior)
 CHS 334 (Marital & Family Counseling)
 CHS 341 (Group Dynamics)
 CHS 343 (Medical and Social Aspects of Disabilities)
 CHS 360 (Individual Assessment)
 CHS 384 (ST: Introduction to Applied Behavioral Analysis)
 CHS 421 (Addictions)
 CHS 422 (Substance Abuse Education)
 CHS 423 (Issues in Substance Abuse)
 CHS 441 (Crisis Intervention)
 EDUC 222 (Educational Psychology Pre K-4)
 EDUC 223 (Educational psychology GR 4-12)
 EDUC 252 (Assessment and Evaluation in Early Childhood Education)
 NURS 373 (Nursing Care of the Childbearing Family)
 NURS 452 (Nursing Care of Children and Adolescents)
 PSYC 334 (Couple and Family Therapy)
 PSYC 335 (Psychological Testing)
 PSYC 361 (Cognitive Behavioral Therapy)
 PSYC 362 (Child Clinical Psychology)
 PSYC 363 (Behavior Modification)
 SOC 328 (Child Welfare)

9. One of the following in the Field Experience group:

PSYC 480 (Field Experience in Clinical Settings)
 PSYC 481 (Field Experience in Applied Settings)
 CHS 380 (Internship in Human Services)
 OT 361 or 381 (Occupational Therapy Practice)
 CHS 441 (Crisis Intervention)
 EDUC 223 (Educational Psychology, GR 4-12)
 NURS 352 & 352L (Mental Health Nursing)
 SOC 480 (Internship in Sociology)

Environmental and Sustainability Studies Concentration

This 18-credit interdisciplinary program introduces students to a diversity of perspectives on the environment and sustainability. The concentration engages students in the practical, theoretical, and moral complexity of environmental problems and prepares them to critically evaluate their causes and solutions. This program supports the Mission of the University by inspiring students to work for environmental justice and become agents of change for a sustainable future.

The concentration requires 6 courses, one each from natural science, social/ behavioral science, humanities, and business/professional studies. The remaining two courses can be from any of the areas. Many of the cross-listed courses also fulfill major, minor, cognate, or general education requirements.

Integrated Data Analysis Concentration

The 16-credit interdisciplinary program enables students of all majors to develop data literacy and apply data science to their major field of study. The goal of the concentration is not to create the next generation of data scientists, but to cultivate data-competent scholars in fields which may or may not traditionally be empirically oriented. The concentration focuses on integrating contemporary data analytic approaches into the content of the home major of the student.

The concentration requires 5 courses: Computer Science I (CMPS 134), Introduction to Data Science (DS 201), Computers and Ethics (PHIL 214), an approved Statistics course (such as that offered by Psychology), and an advanced content course (3 credits of upper-level content in the student's major). In addition, a capstone experience (no credit requirement) is required in the student's major or in another program of study.



VI. Advising

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

Psychology majors benefit from a single faculty advisor from their sophomore through senior years. This approach allows advisors and advisees to know each other better over the years. All freshmen are advised by the CAS Academic Advising Center.

The required 1-credit Career Development Seminar in Psychology also provides extensive advising on academic planning, career development, and graduate school.

How to Use Your Advisor

Sometimes students think that they need a reason to see their advisor, such as to obtain signatures or to change their major. This is a fallacy. When you have questions, go to your advisor. They serve as your guide and advocate.

Your advisor may be busy or unavailable. In these cases, check your advisor's office hours and make an appointment. Since a diversity of interactions is useful, approach other psychology professors as well, especially those who have expertise in your subfields of interest.

Understand and exercise your role in the advising process. Advising is not only something the professor does. It is an active, collaborative process requiring your preparation.

Responsibilities of Advisees

Psychology faculty take the responsibility of advising seriously and expects students to do the same. You should do the following (as listed in the *Undergraduate Advising Handbook*):

- Maintain your paperwork, such as DegreeWorks and schedule changes.
- Read the *Undergraduate Catalog* and the *Psychology Handbook*. Become familiar with the psychology major, the general education requirements, and academic regulations.
- Keep us apprised of changes in your program. When you declare a minor or concentration, please inform us. If you plan to study abroad, then consult with your psychology advisor early in the process.
- Allow adequate time for advising during pre-registration. Make an appointment with your advisor as early as possible and examine your DegreeWorks carefully.

The moral is to seek out your advisor early and often during the registration period.



Advising Hints

1. Tailor the psychology major towards your interests. Consult with advisors for recommended courses to meet your individual interests.
2. We strongly recommend using your 30 credits of free electives to develop minors and concentrations.
3. Up to 15 credits of psychology can be put in the free electives.
4. Only one Special Topics course can be used as a Psychology elective.
5. The GE requirements need not be taken in the sequence set out in the catalog. You have a great deal of flexibility in this regard.
6. Take a diversity of the core 8 psychology courses early in your undergraduate career and strive for breadth of exposure in psychology.
7. Be aware of the scheduling of courses, particularly those offered only one time per year. Behavioral Neuroscience (Fall), Clinical Psychology (Fall), and Learning & Behavior (Spring) are three prominent examples.
8. Note the importance of completing Psychopathology (PSYC 225) as a prerequisite for later courses in clinical/counseling/school psychology.
9. Optimally, Psychology Field Experience courses should be taken in the Spring term of your Junior year or the Fall term of your Senior year. Thus, complete all the prerequisite courses ideally by the Spring of the junior year.
10. If you plan to take the GRE Psychology Test in the Fall of your Senior year, try to take as many of the core 8 psychology electives before then.
11. To conduct research, you do not have to take it for credit. Start with volunteering or FSRP (both of which are free), and then take Undergraduate Research (PSYC 493 & 494) for credit.
12. The Natural Science electives for fulfillment of the General Education requirements are courses designated with an (E). One NSCI course for the Psychology major must be from Biology; the other one may be taken from any department as long as it is designated with an (E).
13. As specified in the Undergraduate Catalog, because of duplicate material, psychology majors should not take Counseling Theories (HS 242).



Preadvising Check List

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

REVIEW OF LIFE CIRCUMSTANCES CHANGES

- Want to discuss changes in life circumstances (e.g., relationships, work, finances, health)?
- Want to discuss how college life is going for you?

REVIEW OF PREVIOUS SEMESTER/S

- Any transfer credits not yet recorded?
- Any deficient or incomplete grades?
- Any failed or dropped courses?

REVIEW OF CURRENT SEMESTER

- Any deficient grades at midterm or dropped courses this semester?

DOUBLE MAJORS, CONCENTRATIONS, MINORS, HONORS

- Any recently added or dropped programs not previously in DegreeWorks?
- Want to discuss dropping a program or adding a new program?
- Need to discuss completing your current program(s) in remaining semesters?
- Want to discuss study abroad?

PROGRESS TOWARDS GRADUATION

- Are you behind on credits to graduate or want to determine if you are on schedule to graduate?
- Need to plan to complete your GE requirements over the remaining semesters?
- Need to discuss completing the cultural diversity requirement?

PROGRESS IN PSYCHOLOGY MAJOR

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

PLAN FOR UPCOMING SEMESTERS

- Want to discuss course selections for the Psychology major?
- Want to discuss course selections for GE, other programs or free electives?

FUTURE PLANS

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

DEGREEWORKS

- Want to review the accuracy of your DegreeWorks?
- Need help correcting DegreeWorks errors?

OTHER GOALS AND CONCERNS YOU WISH TO DISCUSS (list below)

Name: _____ R#: _____

Last Updated: _____

Psychology Curriculum Worksheet

Requirements are in bold. Recommendations are in italics.

Course #	Course Name	Term Taken	Comments	Course #	Course Name	Term Taken	Comments
FALL				SPRING			
Freshman							
PSYC 110	Fundamentals of Psychology	_____		PSYC	Elective (from Core 8)	_____	
PSYC 140	Current Topics in Psychological Science	_____		HUM	Humanities elective	_____	
WRTG 107	Composition	_____		S/BH	Soc/Beh Science elective	_____	
PHIL 120	Intro. to Philosophy	_____		EPI course		_____	
EPI course		_____		PHIL 210	Ethics	_____	
MATH	106, 109, or 114	_____					
Sophomore							
PSYC 211	Research Methods & Statistics I	_____		PSYC 212	Research Methods & Statistics II	_____	
PSYC	Elective (from Core 8)	_____		PSYC	Elective (from Core 8)	_____	
NSCI BIOL	NSCI Biology Elective	_____		NSCI Elective	(E) Elective	_____	
HUM	Humanities elective	_____		S/BH	Soc/Beh Science elective	_____	
GE	Any GE Elective	_____					
Junior							
PSYC	Elective (from Core 8)	_____		PSYC	Elective (from Core 8)	_____	
PSYC	Elective	_____		PSYC	Elective	_____	
PSYC 390	Career Development	_____		PSYC	Elective	_____	
T/RS 121	Theology I	_____					
HUM	Humanities elective	_____		T/RS 122	Theology II	_____	
	Elective	_____		HUM	Humanities elective	_____	
Senior							
PSYC	Elective	_____		PSYC 491	Senior Seminar II	_____	
PSYC 490	Senior Seminar I	_____					
	Phil or Theo elective	_____					
	Elective	_____					
	Elective	_____					
	Elective	_____					

Ideal Progress Grid for Psychology Majors

	Semester Credits	Cumul. Semester Credits	PSYC Semester Credits	Cumul. PSYC Credits	PSYC Program	PSYC Caveats	Required Math & NSCI GE
Freshman Fall	12	12	3	3	PSYC 110 PSYC 140	A grade of C or better is required in PSYC 110 to take 200-level courses.	Math 106, 109, or 114
Freshman Spring	15	27	3	6	1 st core	Core is one course from each of four core pairs.	
Sophomore Fall	16	43	7	13	PSYC 211		NSCI Biol
Sophomore Spring	13	56	7	20	PSYC 212 3 rd core		Any NSCI course
Junior Fall	16	72	7	27	PSYC 390 4 th core PSYC elec.		
Junior Spring	15	87	9	36	5 th PSYC core elec. PSYC elec. PSYC elec.	Complete 4 th core course by this semester.	
Senior Fall	16.5	103.5	4.5	40.5	PSYC 490 PSYC elec.	Ideally PSYC 480 should be completed here or earlier (prerequisites)	
Senior Spring	16.5	120	1.5	42	PSYC 491	PSYC 481 can be taken here	

VII. Planning Your Curriculum

We have addressed the curriculum in Section IV, the psychology major in Section V, and advising in Section VI of this *Handbook*; however, we have not yet addressed how to decide among psychology courses and how to decide among your 30 free elective credits. We do so here.

Deciding Among Psychology Courses

The Psychology major requires 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 foundation in the discipline. For those students considering graduate school in psychology, we recommend additional selections from these eight courses.

Here are several suggestions for selecting among our courses:

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

If you have a particular interest in psychology, then take an elective that will allow you to explore that interest. For example, you might 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 human, or such graduate programs as Cognitive Science or Neuroscience.

The pages on Psychology Career Paths in Section V feature recommended psychology courses for students interested in clinical/counseling/school psychology, industrial/organization or personnel psychology, biopsychology, and cognitive psychology. Kindly review those course recommendations.

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

Choosing Free Electives

We have purposefully designed the psychology major with a large area for free electives. These 30 credits should be used first for your double majors, concentrations, and minors. Recall that the Psychology Department formally recommends that its students graduate with a concentration and/or a minor.

If you have remaining credits, then use them to create a well-rounded education. Let your GE free elective choices be guided by your interests and your advisor.

Example of a Master Schedule

(Subject to Change)

FALL

Fundamentals of Psychology	(PSYC 110)	10 sections	Multiple instructors
Current Topics in Psych Science	(PSYC 140)	2 sections	Dr. Warker
Research Methods & Statistical Analysis I	(PSYC 211)	2 sections	Drs. Hopkins, Reynolds
Research Methods & Statistical Analysis II	(PSYC 212)	1 section	Dr. Reynolds
Social Psychology	(PSYC 220)	1 section	Dr. Nolan
Personality and Individual Differences	(PSYC 224)	1 section	Dr. Schuster
Psychopathology	(PSYC 225)	4 sections	Drs. Schuster, Vento
Lifespan Development: Cognitive & Biological	(PSYC 226)	2 sections	Dr. Hopkins
Lifespan Development: Social & Emotional	(PSYC 227)	2 sections	Dr. Slotterback
*Behavioral Neuroscience	(PSYC 231)	2 sections	Dr. Orr
Cognitive Psychology	(PSYC 234)	1 sections	Dr. Burnham
*Psychology of Women	(PSYC 237)	1 section	Dr. Slotterback
*Exercise and Sport Psychology	(PSYC 238)	1 section	Dr. O'Malley
*Psychological Testing	(PSYC 335)	1 section	Dr. Betancourt
*Clinical Psychology	(PSYC 360)	1 section	Dr. Norcross
*Career Development in Psychology	(PSYC 390)	3 sections	Dr. Betancourt
Field Experience in Clinical Settings	(PSYC 480)	1 section	Dr. Norcross
*Senior Seminar I	(PSYC 490)	2 sections	Dr. Karpiak
*Advanced Topic Seminar: Teaching	(PSYC 492)	1 section	Dr. Warker
Undergraduate Research in Psychology	(PSYC 493)	1 section	Staff

INTERSESSION

Fundamentals of Psychology	(PSYC 110)	1 section	Staff
Statistics in the Behavioral Sciences	(PSYC 210)	1 section	Dr. Kuhle

SPRING

Fundamentals of Psychology	(PSYC 110)	8 sections	Multiple instructors
Research Methods & Statistical Analysis I	(PSYC 211)	1 section	Dr. Hopkins
Research Methods & Statistical Analysis II	(PSYC 212)	2 sections	Drs. Hopkins, Reynolds
Social Psychology	(PSYC 220)	1 section	Dr. Nolan
Lifespan Development: Cognitive & Biological	(PSYC 226)	2 sections	Dr. Slotterback
Lifespan Development: Social & Emotional	(PSYC 227)	1 section	Dr. Slotterback
Personality and Individual Differences	(PSYC 224)	1 section	Dr. Schuster
Psychopathology	(PSYC 225)	4 sections	Drs. Schuster, Vento
*Sensation and Perception	(PSYC 230)	1 section	Dr. Burnham
*Psychology of Language	(PSYC 232)	1 section	Dr. Warker
*Evolutionary Psychology	(PSYC 233)	1 section	Dr. Kuhle
Cognitive Psychology	(PSYC 234)	2 sections	Dr. Warker
*Learning and Behavior	(PSYC 235)	1 section	Dr. Orr
**Industrial/Organizational Psychology	(PSYC 236)	1 section	Dr. Nolan
*Environmental & Conservation Psychology	(PSYC 239)	1 section	Dr. Nolan
**Psychology of Racism	(PSYC 242)	1 section	Dr. Betancourt
*Research Methods in the Behavioral Sciences	(PSYC 330)	1 section	Dr. Kuhle
*Positive Psychology	(PSYC 365)	1 section	Dr. Norcross
*Forensic Psychology	(PSYC 366)	1 section	Dr. Reynolds
Field Experience in Clinical Settings	(PSYC 480)	1 section	Dr. Norcross
*Field Experience in Applied Psychology	(PSYC 481)	1 section	Staff
*Senior Seminar II	(PSYC 491)	4 sections	Drs. Karpiak, Norcross
Undergraduate Research in Psychology	(PSYC 493)	1 section	Staff

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

VIII. Undergraduate Research

You have learned that graduate schools and employers alike highly value undergraduates conducting research. You have also learned that University of Scranton psychology students present and publish research at rates far higher than national norms. In this section, we detail the avenues by which our students typically conduct research, explain why undergraduates should engage in research, and highlight recent examples of our students' research with psychology faculty.

Research Opportunities

Scranton's Psychology Department provides 4 avenues for faculty-sponsored student research. You may participate in as many as you like.

First, all students may volunteer as a research assistant without academic credit or transcript recognition. This is an excellent way to get your feet wet in the research enterprise without a major commitment of time.

Second, the Faculty/Student Research Program (FSRP) is a university-wide opportunity for all undergraduates to conduct research with faculty. It is a free program for which students receive transcript recognition.

Third, consider taking the Honors Program and completing a thesis therein. This path provides academic credit and requires a formal application to the Honors Program. Speak to your advisor or any psychology faculty about this opportunity.

Fourth, Undergraduate Research in Psychology (PSYC 493-494) provides both academic credit and transcript recognition. We encourage you to enroll in PSYC 493-494 during the junior and/or senior years. You can sign up for 1 to 3 credits per semester, with a maximum of 6 credits toward your degree. This recommendation applies to all students, independent of your interest areas and career aspirations.

A final avenue for undergraduate research is *not* provided directly by the University of Scranton. Rather, it is provided by another institution of higher education, typically over the summer months. These are known as Research Experiences for Undergraduates (REUs) and are structured, formal programs for stellar college students interested in pursuing advanced training in psychological research. These REUs last for two weeks up to the entire summer. The programs seek students after their junior years, so you apply in the early Spring of that year. Speak to your advisor or any Scranton psychology faculty about this exciting opportunity.

Caring for Inquiring Minds

(adapted with permission from J. Pallodino, *APA Monitor*)

Should undergraduates be encouraged to engage in research? We, as a Department, believe 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:

- * Articulating and communicating concepts
- * Comprehending the relationships between concepts
- * Learning how to learn
- * Thinking independently
- * Recognizing assumptions and seeing all sides of an issue
- * Holding pro-scientific, anti-authoritarian values

Few would argue with these goals as a partial statement of the desired result of a college education. These are also goals which participation in undergraduate research can influence. For those concerned about careers, we argue that our students will be better prepared if they develop a wide range of skills than if their skills are geared to a specific job existing in today's market.

We are all consumers not only of tangible products, but also of ideas. We need a scientific, questioning attitude to help us evaluate the claims that bombard us every day in the media. We need to constantly ask: "What do they know?" "How do they know it?"

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

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

Get started early. A research orientation and a questioning attitude are instilled in a variety of courses. But we don't try to shove research down your throats. We introduce you to simple data collection techniques, such as naturalistic observation and archival data collection. Later, you are asked to communicate your own research to the entire class. This is one of the central purposes of our Research Method & Statistical Analysis sequence.

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

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

Present your research. Presentation in class is a minimum requirement. Participation in research conferences is strongly encouraged. Our students have historically presented at annual meetings of the Eastern Psychological Association (EPA) plus specialty conferences (e.g., Society for Neuroscience).

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 undergraduates is consistent with the goals of a liberal arts education.

Students who engage in research will be better equipped to deal with an expanding accumulation of information and an ever-changing world. One week after the final exam, few of you will recall the diagnostic criteria for any of the DSM5 disorders. Few will remember whether the amygdala refers to an Italian antipasto or a part of the brain, and none will know the formula for an analysis of variance.

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

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

Recent Student Research

Below is a list of publications and presentations by our psychology (and neuroscience) students from 2020 to 2023. Student names are marked by an asterisk (*).

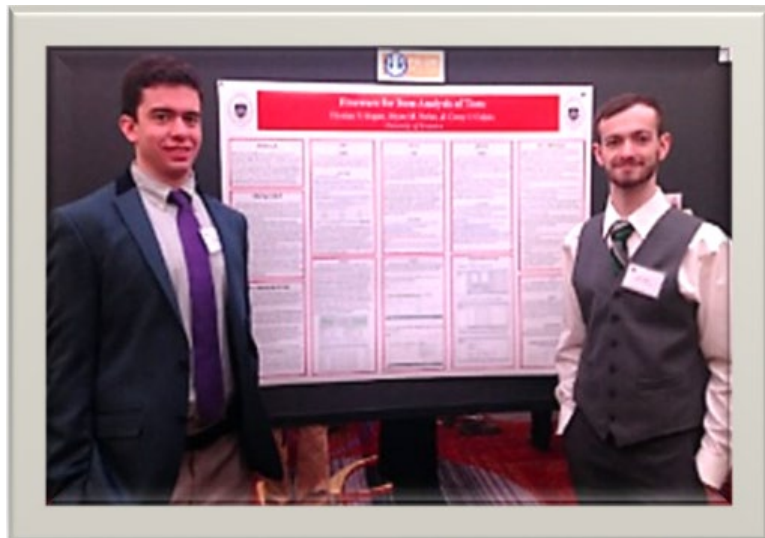
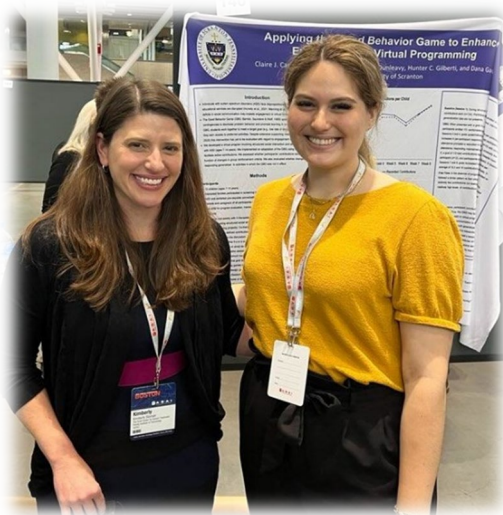
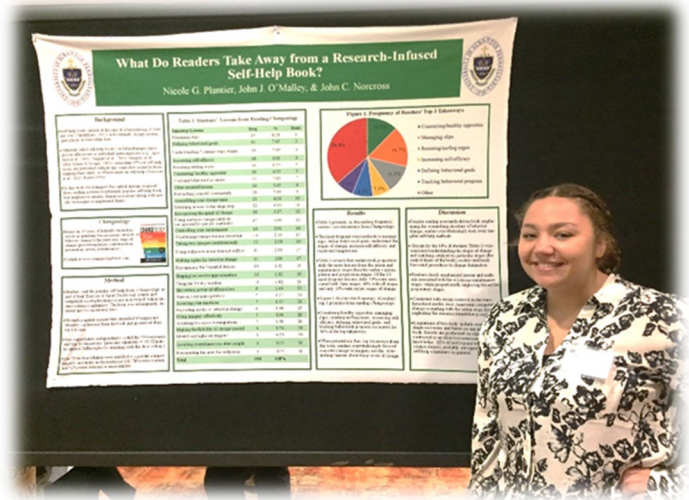
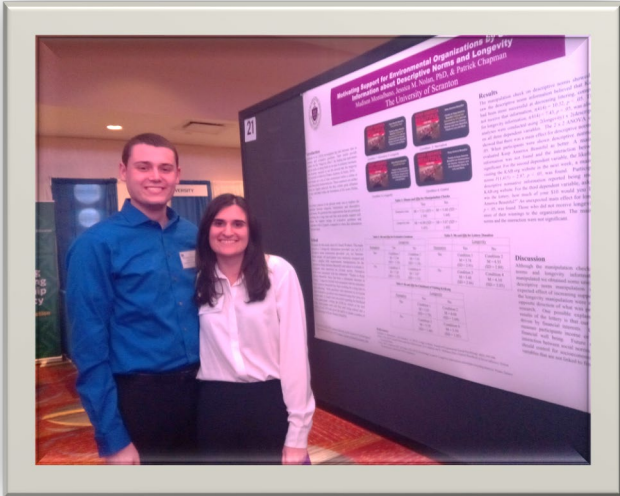
- *Bock, C. & Nolan, J. M. (2020, March). *Tire pressure field experiment testing the Effectiveness of acknowledgment of Resistance*. Eastern Psychological Association, virtual conference.
- Burnham, B. R., *Zeide, J., & *Long, E. (2021). Pitch direction on the perception of major and minor tonal modes. *Attention, Perception & Psychophysics*, 83(1), 399-414.
- *Carachilo, C., *Goldschlager, J., & Norcross, J. C. (2022, March). *Post-pandemic changes in doctoral psychology admissions: The fate of GREs and interviews*. Poster presented at the annual conference of the Eastern Psychological Association, New York.
- *Carachilo, C. B., Norcross, J. C., *Rocha, M. N., & Sayette, M. A. (2022, Fall). Four upheavals in doctoral admissions in clinical and counseling psychology. *Eye on Psi Chi*, 27(1), 44 - 47.
- *Carrera, C., *McDonnell, C., Gadaire, D., *Dunleavy, E., & *Gilberti, H. (2022, May). *Applying the Good Behavior Game to increase engagement in virtual programming*. Poster presented at the Association for Applied Behavior Analysis, Boston, MA.
- *Chrysler, A. A., *Rocha, M. N., & Norcross, J. C. (2023, March). *American psychologists conducting psychotherapy in 2022*. Poster presented at the annual meeting of the Eastern Psychological Association, Boston.
- Conroy, J. C., Stamm, K. E., *Pfund, R. A., Christidis, P., Hailstorks, R., & Norcross, J. C. (2022). Career assistance from psychology programs and career services: Who is preparing psychology students? *Teaching of Psychology*, 49, 144-152.
- *Cook, D. M., *Goldschlager, J. R., & Norcross, J. C. (2021, March). *What has COVID-19 wrought? Its impact on clinical psychology programs*. Poster presented at the annual convention of the Eastern Psychological Association, virtual conference.
- *Coviello, C., *Long, E., *Golden, J., Wolff, C., Karpiak, C., & *Goldschlager, J. (2020, June). *PCIT in a community treatment setting: Early engagement and patterns of change*. Poster presented at the annual meeting of the Eastern Psychological Association, virtual.
- *Dawid, P. & Karpiak, C. P. (2022, March). *Predicting treatment stigma using attitudes associated with self-reliance*. Poster presented at the annual meeting of the Eastern Psychological Association, New York.
- *Diaz, K., & Nolan, J. M. (2022, March). *Crisis at the southern border*. Poster presented at the annual meeting of the Eastern Psychological Association, New York.
- *Goldschlager, J., *Carachilo, C., Norcross, J. C., & Sayette, M. A. (2022, March). *Student race, gender, nationality, and LGBT ally groups in doctoral psychology programs*. Poster presented at the annual conference of the Eastern Psychological Association, New York.

- Hopkins, E. J., & *Cook, D. M. (2022, April). *The effect of gender norms and division of labor on parent play styles*. Poster presented at the Society for Research in Child Development, St. Louis, MO.
- Karpiak, C. P., *Golden, J., *Goldschlager, J., & *Rebolledo, L. (2021, August). *Rapid response and PCIT outcome in a community setting*. Poster presented at the annual meeting of the American Psychological Association, San Diego (virtual).
- Karpiak, C. P., *Golden, J., *Goldschlager, J., & *Rebolledo, L. (2021, June). *Testing a simple warning system for community-based Parent Child Interaction Therapy*. Poster presented at the annual meeting of the Society for Psychotherapy Research, Heidelberg (virtual).
- *Lenway, A. & Karpiak, C. P. (2022, March). *An investigation into retention of underrepresented students in STEM majors*. Poster presented at the annual meeting of the Eastern Psychological Association, New York.
- *Marshall, S., Warker, J. A., Tlan, Y., & Fischer-Baum, S. (2022, March). *Investigating the relationship between speech errors and inhibition*. Poster presented at the Eastern Psychological Association. New York.
- *Nessel, E., & Hopkins, E. J. (2023, March). *Transmission of gender stereotypes from parent to child through play*. Poster presented at the annual meeting of the Eastern Psychological Association: Boston, MA.
- Nolan, J. M., *Basalyga, O., *Bock C., *Hacker, C., Grettano, T. & Schumacher Cohen, J. (2021, March). *Reflective structured dialogue reduces political prejudice*. Poster presented at the annual convention of the Eastern Psychological Association.
- Nolan, J. M., *Bobko, A. (2023, February). *Extraversion: A double-edged personality trait in pro-environmental behavior*. Poster presented at the annual convention of the Society for Personality and Social Psychology, Atlanta, GA.
- Nolan, J. M., *Bock, C., *Basalyga, O., *DiSanto, N., & *Hacker, C. (2020, March) *Content analysis of 1,000+ Proenvironmental Behavior (PEB) articles*. Poster presented at annual meeting of of the Eastern Psychological Association.
- Norcross, J. C., & *Carachilo, C. B. (2023). Integrative psychotherapy. In H. S. Friedman & C. Markey (Eds.), *Encyclopedia of mental health* (3rd ed.). Elsevier.
- Norcross, J. C., *Cook, D. M., & Fuertes, J. N. (2022). Patient readiness to change: What we know about their stages and processes of change. In J. N. Fuertes (Ed.), *The other side of psychotherapy*. American Psychological Association.
- Norcross, J. C., *Pfund, R. A., & *Cook, D. M. (2021). The predicted future of psychotherapy: A decennial e-Delphi poll. *Professional Psychology: Research & Practice*, 53, 109-115.
- Norcross, J. C., & *Phillips, C. M. (2020). Psychologist self-care during the pandemic: Now more than ever. *Journal of Health Service Psychology*, 46, 59-63.
- *Pfund, R. A., *Cook, D. M., & Norcross, J. C. (2021, November). *Psychotherapy theories, methods, and practitioners of the future: An expert poll*. Poster presented at the annual conference of the Association for Behavioral and Cognitive Therapies, New Orleans.
- *Rocha, M. N., & Norcross, J. C. (2023, March). *20 years of career development seminar in psychology: What worked and what didn't*. Poster presented at the annual meeting of the Eastern Psychological Association, Boston.
- *Stanczak, O., Reynolds, J. J., & *Trautfetter, E. (March, 2023). *Examining juror opinions between felons and non-felons*. American Psychology-Law Society annual conference, Philadelphia, PA.

*Trautfetter, E., Reynolds, J. J., & *Stanczak, O. (March, 2023). *The impact of an empathy manipulation on the perception of juvenile false confessions*. American Psychology-Law Society annual conference, Philadelphia, PA.

*Ziede, J. S., & Norcross, J. C. (2020). Personal therapy and self-care in the making of psychologists. *Journal of Psychology*, 154, 585-618.

*Ziede, J. S., Norcross, J. C., & Sayette, M. A. (2020, March). *Pre-admission interview policies of APA-accredited programs: You will be interviewed!* Poster presented at the annual conference of the Eastern Psychological Association, Boston.



IX. Internships & Teaching Assistantships

The Psychology faculty proudly and publicly proclaim that our program emphasizes hands-on, experiential learning. Undergraduate research (previous section) is a cornerstone of this approach, as are community internships and teaching assistantships.

Internships

You can only learn so much from your textbooks; internships represent experience in the field. In many respects, internships constitute a capstone by which you integrate your learning within psychology and by which you explore your interest and suitability for potential careers.

Field experiences or internships markedly differ from a regular college course. A regular course is highly structured, predictable, led by the professor, and largely spoon feeds the student. By contrast, an internship is less structured, unpredictable, led by you, and the benefits largely depend upon your effort and initiative.

Two overarching themes of an internship are *self-directed learning* and *professionalism*. Self-directed means the internship results are largely dependent on you, not the professor. You are provided with leads and advice, but you negotiate your learning objectives, you ask for opportunities, you deal with conflicts, you schedule field hours. Do not wait to be asked or invited; you take the initiative and assume the responsibility.

Likewise, you are expected to become professionals. Professionalism comes in many guises. How you dress. How you show early for appointments. How you ask for supervision and meetings. How you stand and shake hands. You are now professionals in the real world; quite different than shuffling into class unprepared and late wearing pajama pants and tee shirts.

For-credit internships in psychology are provided through two Scranton courses.

Field Experience in Clinical Settings (PSYC 480) is offered every Fall and Spring semester. The prerequisites are psychology major; junior or senior standing; a grade of C or higher in PSYC 225 and PSYC 360; and permission of instructor. The course entails supervised field experience in a mental-health or social-service facility in the community. Students are required to spend 8 hours a week at their placement and 1.5 hours a week in a seminar throughout the semester. The professor provides the classroom instruction, and the on-site supervisor provides the clinical supervision.

To register for this internship, complete the prerequisites by the end of your junior year (ideally) and then during preregistration complete the online Field Experience Sign-Up found on the Psychology website (right-hand column; www.scranton.edu/academics/cas/psychology).

Field Experience in Applied Settings (PSYC 481) is offered only in the Spring semester. This internship is designed for psychology majors seeking practical experience outside of the clinical and mental health arenas. Frequent field placements are in personnel offices, speech pathology clinics, women's resource centers, forensic settings, and child development centers. The prerequisites are a psychology major; junior or senior standing; a grade of B or higher in the psychology course that the faculty mentor deems most relevant to the field experience; and permission of instructor. The course involves 100 hours of field experience in non-clinical settings that apply psychology, including cognitive, developmental, environmental, forensic, gerontological, language, quantitative, organizational, personnel, and social psychology.

Students meet 6 times in a group seminar and an additional 6 times individually with a faculty mentor. An on-site supervisor will direct weekly duties.

To register for this internship, follow these steps:

1. Identify your area(s) of interest in applied psychology. (If your interests lie primarily in the clinical area, then you should be taking Field Experience in Clinical Settings, not this course.)
2. Establish that you have met the general prerequisites (psychology major; junior or senior standing) and have completed the listed prerequisite course with a grade of B or higher.
3. Approach in the Fall semester a psychology faculty member in your area of interest. Discuss your abiding interest, academic preparation, and career plans in that area and then ask if they are willing to mentor you in the Spring semester. You need a firm commitment from a full-time psychology faculty member to mentor you in the Spring semester.
4. Expect the faculty mentor to assign you an established placement site, to ask you to contact a few suggested sites on your own, and/or to refer you to the University's Center for Career Development (ask for an appointment with Ms. Lori Moran) to identify a placement site.
5. Complete the online Field Experience Sign-Up form. It is located on the Psychology website.
6. Expect an email after preregistration is complete from the course instructor to finalize arrangements and to secure permission to take the course (as it is by permission of the instructor). The instructor will then formally register you for the course, which is limited to 10 psychology majors per Spring semester.

Research indicates that approximately 82% of universities provide undergraduate internships in psychology (Norcross et al., 2018). Students consistently rate the field experience as one of the most rewarding and relevant courses in their college career. Students also rate it, not surprisingly, as taking more time than an average 3-credit course.

Humans learn "on the job" and "in service." For all these reasons, your psychology internship will, in all probability, be one of the most memorable and rewarding experiences of your undergraduate career.

Teaching Assistantships

Teaching Assistants or TAs are typically reserved for graduate students. But not so in the Scranton Psychology program! More than one-third of psychology majors serve as undergraduate teaching assistants.

Psychology students can approach their faculty with whom they have completed a course with a strong grade and volunteer to serve as their TA the next semester they teach that course. Or some psychology faculty may invite you to be their TA, based on your excellent performance in their class.

Either way, you can register for the Student/Faculty Teaching Mentorship Program. That's a university-wide program that provides you with transcript recognition at no cost. In addition, in the Fall semester, several psychology faculty offer a 1-credit Teaching Seminar for select psychology TAs.

What can you expect to do as a psychology TA? A recent survey of 53 Scranton psychology TAs (Dillon & Norcross, 2019) determined that their most frequent activities were scoring multiple-choice items for quizzes/exams, attending classes, performing quantitative item analyses of quizzes/exams, attending weekly meetings with the professor, managing the grade book, and correcting homework assignments. Undergraduate TAs do *not* assign grades.

Apart from frequency, we also asked which activities the TAs found most valuable. The most valued activities involved attending scheduled classes, contracting with the professor about TA responsibilities, providing feedback to the professor on class progress, contributing comments during class when prompted by the professor, and performing quantitative item analyses. Also receiving high endorsement were acting as a source of information or sounding board for students, creating and delivering an in-class activity, responding to student emails, and discussing TA ethics and boundaries with the professor.

There's a lot of value in serving as a psychology TA at Scranton!



X. Careers in Psychology

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

The following table shows the number of Ph.D.s awarded in psychology by subfield. You can see the growing popularity of psychology at these 18-year intervals.

Subfield	Number of Ph.D.'s awarded		
	1976	1994	2012
Clinical	883	1,329	2,650
Cognitive	—	76	452
Counseling	267	464	420
Developmental	190	158	50
Educational	124	98	470
Experimental	357	143	110
Industrial/Organizational	73	124	130
School	143	81	260
Social	271	165	40
Other or general	387	560	1,548
Total	2,883	3,287	6,110

Data from National Research Council, National Center for Education Statistics.

In the Career Development Seminar (PSYC 360), you will read about employment possibilities in psychology at both the baccalaureate-level and graduate-level in these psychology subfields. Indeed, you will read an entire book devoted to this topic. For now, however, we briefly introduce you to the major specialties of psychology.

Clinical Psychology

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

Clinical psychologists work in both academic institutions and health care settings such as clinics, hospitals, community mental health centers, and private practices. Many clinical psychologists focus their interests on special populations such as children, minority groups, or the elderly. Others focus on treating certain types of problems, such as anxiety, eating disorders, or depression. Opportunities in clinical psychology are expanding relative to populations that have not been served well in the past: children, families, the elderly, inmates, ethnic groups, and rural dwellers.

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 psychotherapy. For further information

in this area, please refer to www.div12.org/, www.clinicalchildpsychology.org/, www.abct.org/Home/

Counseling Psychology

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

Counseling psychologists often use research to evaluate the effectiveness of treatments. Research methods may include structured tests, interviews, interest inventories, and observations. They also may be involved in a variety of activities, such as helping people adjust to college, consulting on physical problems that might have psychological causes, teaching graduate-level practica in counseling, or developing techniques that students can use to reduce their anxiety about taking examinations. For further information in this area, please refer to www.div17.org

Developmental Psychology

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

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

Environmental Psychology

Environmental psychologists are concerned with how humans affect, and are affected by, environments. Topics of interest to environmental psychologists include territoriality, personal space, crowding, cognitive mapping of places, effects of urban life, the restorative effects of nature, and the effects of weather and noise on human behavior. Conservation psychologists work in a related area concerned with the human impact on the environment. Conservation psychologists conduct research designed to understand and solve environmental problems, such as global warming.

Environmental and conservation psychologists can be found in a wide array of academic and nonacademic settings. Consultants and academics typically have a doctoral degree, but environmental psychologists can also be employed with a master's degree in federal agencies, urban and regional planning agencies, and environmental design firms. For an overview of conservation psychology, please visit www.apadivisions.org/division-34/interests/conservation.

Evolutionary Psychology

Evolutionary psychologists study human nature. They are interested in discovering and understanding the information-processing mechanisms that evolved to solve ancestral adaptive problems. Knowledge of psychology can be gained by considering how our thoughts, feelings, and behaviors increased our ancestors' reproduction. They use a multitude of methods to explore

a broad range of topics, including language, mating, parenting, kinship, cooperation, altruism, aggression, and conflict between the sexes.

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

Exercise & Sport Psychology

Exercise and sport psychology is the study of the psychological aspects of sport and physical activity. Sport psychologists examine topics such as the ways an athlete can use visualization techniques and ways sports teams can cooperate to work more effectively together.

Like other psychologists, some sport psychologists conduct research in academic, government, and business settings. Others help individuals and teams improve their athletic performance and train coaches to help them become more productive. For further information in this area, please refer to www.apa.org/about/division/div47

Experimental Psychology

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

Most experimental psychologists work in academic settings, teaching courses and supervising students' research in addition to conducting their own research. They 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, please refer to www.apadivisions.org/division-3/index.aspx, www.apadivisions.org/division-21/index.aspx, www.cognitivesciencesociety.org

Forensic Psychology

Forensic psychology is the term given to the applied intersection 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 they sustained psychological or neurological damage. In criminal cases, forensic psychologists might evaluate a defendant's mental competence to stand trial.

Some specialists in this field have doctoral degrees in both psychology and law. Others were trained in a clinical psychology program and chose courses, research topics, and practical experiences to fit their interest in psychology and law. Jobs for people with doctoral degrees are available in psychology departments, law schools, research organizations, law enforcement agencies, courts, and correctional settings. Some forensic psychologists work in private practice. For further information in this area, please refer to www.apadivisions.org/division-41/index.aspx

Geropsychology

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

Many people interested in the psychology of aging are trained in a more traditional graduate program in psychology, typically clinical, developmental, or social. While they are enrolled in such a program, they become geropsychologists by focusing their research, coursework, and practical experiences on adult development and aging. Geropsychologists are finding jobs in academic settings, research centers, industry, health care organizations, and agencies serving the elderly. For further information, please refer to apadiv20.php.ufl.edu

Health Psychology

Clinical health psychologists are researchers and practitioners concerned with psychology's contribution to the promotion and the maintenance of good health, and the prevention and the treatment of illness. As clinicians, they may design and conduct programs to help individuals stop smoking, lose weight, manage stress, or stay physically fit. As researchers, they seek to identify practices that are associated with health and illness. For example, they might study the effects of relocation on elderly persons' physical well-being. In public service roles, they study and work to improve government policies and systems for health care. For further information in this area, please refer to societyforhealthpsychology.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, and development of personnel; and the interaction between humans and machines. Their responsibilities on the job include research, development, and problem solving. I/O psychologists work in businesses, industries, governments, and universities. Some may be self-employed as consultants or work for management consulting firms.

Jobs for industrial/organizational psychologists are available at both the master's and the doctoral level. Opportunities for those with master's degrees tend to be concentrated in business, industry, and government settings; doctoral-level psychologists also work in academic settings and independent consulting work. For further information in this area, refer www.siop.org, www.apa.org/about/division/div14.aspx, www.hfes.org

Neuropsychology

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

Clinical neuropsychologists work in the neurology, neurosurgery, psychiatric, and pediatric units of hospitals, and in clinics. They also work in academic settings where they conduct research and train others. Most positions in neuropsychology are at the doctoral level, and many require postdoctoral training. For further information, go to www.apa.org/about/division/div6.aspx, www.cogneurosociety.org, www.apa.org/about/division/div28.aspx

Psychology of Gender

The psychology of women and men is the study of factors affecting gender development and behavior. The field includes the study of stereotypes, the relation of hormones to behavior, and the development of gender roles, gender identity, and sexuality. Current research topics include reactions to rape, factors that promote managerial success, and factors that discourage talented girls from obtaining advanced mathematics training. Clinicians whose area of concentration is the psychology of men focus on psychotherapy with men.

Psychologists focusing on the psychology of gender are found in academic settings and sometimes in clinical settings. Consult for further information www.apa.org/about/division/div35.html and www.apa.org/about/division/div51.aspx

Quantitative Psychology

Psychometric and quantitative psychologists are concerned with the methods used in acquiring and applying psychological knowledge. A psychometrician may revise intelligence or personality tests or devise new ones. Other quantitative psychologists might assist a researcher in psychology or in another field design to interpret the results of an experiment. Psychometricians and quantitative psychologists typically are well trained in mathematics, statistics, computer programming, and technology.

Doctoral-level psychometricians and quantitative psychologists are employed mainly by universities and colleges, testing companies, private research firms, and government agencies. Those with master's degrees often work for testing companies and private research firms. For further information, refer to www.apa.org/about/division/div5.aspx

School Psychology

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

To be employed in the public schools, school psychologists must complete a state-approved master's program and be certified by the state. Certification as a school psychologist can usually be obtained after 60 hours of graduate work and a one-year supervised internship. Please refer to www.apa.org/about/division/div16.aspx

Social Psychology

Social psychologists study how people interact with each other and how they are affected by their social environments. Topics of interest to social psychologists include the formation of attitudes and attitude change, attractions between people such as friendship and love, prejudice, group dynamics, and violence and aggression. Social psychologists might, for example, 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. Please refer to any of the following websites: www.spssp.org, www.spssi.org, www.sesp.org

A Word about Salaries

Psychologists earn a wide range of salaries, depending more on the nature of their job than on their particular specialty. For example, a person with a B.S. in psychology working as a Mental Health Technician might make \$30,000 a year, while an academic psychologist at a university

might make \$70,000 to \$180,000. Similarly, a psychologist working in research at a drug company or a management position will probably make more than one who is a university professor. A doctoral-level clinical psychologist in full-time independent practice will average \$125,000 a year. More experienced psychologists typically earn more than the average, of course.

Master-level mental health professionals predictably earn less than doctoral-level clinical or counseling psychologists. School psychologists with a master's degree average \$75,000 per year. Masters-level clinicians, such as counselors and social workers, in agencies will earn between \$40,000 and \$60,000 and those in private practice closer to \$70,000.

High-paying jobs in psychology per se are rare without a graduate degree. In general, people with graduate degrees earn more if they are employed by industry, the federal government, or in private practice. Jobs in public agencies and universities (with the exception of administrative positions) typically have lower, although still quite adequate, pay scales.

2017 Average Salaries for Psychologists

Type of Position	Doctoral level
Faculty – Full Professor	\$130,000
Faculty – Assistant Professor	\$60,000
Educational Administration	\$125,000
Private Practice	\$125,000
Research Positions	\$60,000
Management Positions	\$136,000
School Psychology	\$85,000
I/O Psychology	\$125,000
Sources: 2017 National Survey of College Graduates; National Science Foundation	



XI. Psychology & the Helping Professions

The fields of clinical, counseling, and school psychology involve working with people in a helping relationship. There are six core mental health disciplines, of which psychology is one. The other five are psychiatry, clinical social work, psychiatric nursing, counseling, and marital/family therapy. Applied Behavior Analysis (ABA) is rapidly becoming another core profession.

Psychologist	Doctorate (Ph.D., Psy.D.) in clinical, counseling, or school psychology followed by a one-year internship. Psychologists are the only health professionals to perform psychological testing. Some states now permit psychologists to prescribe psychoactive medications.
Psychiatrist	Medical doctor (M.D., D.O.) who has completed a 3-year residency in psychiatry after completing medical school. Specialists in psychoactive medications and biological treatments of mental disorders.
Psychiatric Nurse	Baccalaureate (B.S.N.) and master's (M.S.N.) in nursing with a focused interest in mental health.
Clinical Social Worker	Master's degree in social work (M.S.W.) followed by several years of supervised clinical experience (leading to state licensure).
Professional Counselor	Master's degree (MA, MS) in counseling followed by several years of supervised experience leading to state licensure.
Marital/Family Therapist	Master's degree (MA, MFT) in marital or family therapy followed by supervised experience, leading to state licensure.

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

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

A related misconception concerns required training for certain clinical specialties. A doctorate in clinical or counseling psychology is required *prior* to specializing in clinical neuropsychology, clinical child psychology, forensic psychology, or clinical health psychology. Accordingly, the most appropriate major for individuals with these interests is psychology.

XII. Careers with a Bachelor's Degree

About 50% of Scranton B.S. psychology students will immediately seek full-time employment after they graduate. The good news is that, of the psychology majors entering the labor force one year after graduation, 98% were employed. The average salary of a B.S. psychology major is \$57,000.

Psychology is the third or fourth most popular college major. Approximately 125,000 seniors graduate with a degree in psychology each year, but many are not necessarily interested in a career as a psychologist. The National Center for Education Statistics reports that 20% of psychology baccalaureate recipients work in social services or public affairs, 21% in administrative support, 14% in education, 10% in business, 10% in sales, 9% in service personnel, and 5% in health professions. An additional 3% find themselves working in computer science and an equal percentage in biological sciences.

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

All this is to say that the study of psychology at the bachelor's level is fine preparation for many professions. The argument that a psychology degree prepares students for multiple careers is supported by the National Science Foundation. They determined that psychology baccalaureate recipients work in a broad range of careers: 30% in management or administration, 28% in sales or professional services, 16% in teaching, and 12% in production or inspection.

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

The one general weakness of social science majors was in quantitative ability. Psychology, however, is the exception in providing a quantitative background. This attests to the value of our requiring competence in math, statistics, and research methods.

What a Psychology Major Provides

The liberal arts education with a psychology major at the University of Scranton enhances those skills critical to job success. These prominently include:

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

THE SKILLFUL PSYCHOLOGY STUDENT

PREPARED FOR SUCCESS IN THE 21ST CENTURY WORKPLACE

Psychology provides skills that employers value.



Analytical thinking: Solve complex problems, attend to details, plan proactively, and display comfort with ambiguity.

Critical thinking: Display proficiency with statistics, program evaluation, and research design necessary for the study of social and technical systems.

Creativity: Use innovative and resourceful approaches to problem solving and new tasks.

Information management: Be adept at locating, organizing, evaluating, and distributing information from multiple sources.

Judgment and decision making: Engage in logical and systematic thinking and ethical decision making when considering the possible outcomes of a particular action.



Oral communication: Demonstrate strong active listening and conversational abilities in both informal and professional environments, as well as aptitude for public speaking and communicating scientific information to diverse audiences.

Written communication: Comprehend relevant reading materials to produce professional documents that are grammatically correct, such as technical or training materials and business correspondence.



Adaptability: Adjust successfully to change by responding in a flexible, proactive, and civil manner when changes occur.

Integrity: Perform work in an honest, reliable, and accountable manner that reflects the ethical values and standards of an organization.

Self-regulation: Manage time and stress by completing assigned tasks with little or no supervision; display initiative and persistence by accepting and completing additional duties in a careful, thorough, and dependable manner.



Collaboration: Work effectively in a team by cooperating, sharing responsibilities, and listening and responding appropriately to the ideas of others.

Inclusivity: Demonstrate sensitivity to cultural and individual differences and similarities by working effectively with diverse people, respecting and considering divergent opinions, and showing respect for others.

Leadership: Establish a vision for individuals and for the group, creating long-term plans and guiding and inspiring others to accomplish tasks in a successful manner.

Management: Manage individuals and/or teams, coordinate projects, and prioritize individual and team tasks.

Service orientation: Seek ways to help people by displaying empathy; maintaining a customer, patient, or client focus; and engaging in the community.



Flexibility/adaptability to new systems: Be willing and able to learn and/or adapt to new computer platforms, operating systems, and software programs.

Familiarity with hardware and software: Demonstrate competency in using various operating systems, programs, and/or coding protocols; troubleshoot technical errors; and use software applications to build and maintain websites, create web-based applications, and perform statistical analyses.

The previous page, provided by the American Psychological Association, outlines the skill sets of the successful psychology student. You will find that these skills are repeatedly imparted in psychology classes, research labs, field experiences, teaching assistantships, and extracurricular activities.

What Employers Seek

Dozens of research studies have now examined the applicant characteristics that employers prioritize when hiring. Here we summarize the results of 3 studies from that large literature.

In a large study entitled *It Takes More than a Major*, the Association of American Colleges and Universities (AAC&U, 2013) commissioned surveys and focus groups of 318 organizations. The top qualities employers look for in new college graduates were:

- Ability to work well in teams, especially with people different from you
- Understanding of science and technology and how they are used
- Ability to write and speak well
- Ability to think clearly about complex problems
- Ability to analyze a problem to develop workable solutions
- Understanding of global context in which work is now done
- Ability to be creative and innovative in solving problems
- Ability to apply knowledge and skills in new settings
- Ability to understand numbers and statistics

Other findings: Nearly all employers surveyed (95%) say they give hiring preference to college graduates with skills that enable them to contribute to innovation in the workplace. Nearly all employers (93%) say that a demonstrated capacity to think critically, communicate clearly, and solve complex problems is *more important* than [a candidate's] undergraduate major. More than 90% say it is important that new hires demonstrate integrity, intercultural skills, and the capacity for continued learning.

Employers routinely endorse several educational practices as potentially helpful in preparing college students for workplace success: conduct research; use evidence-based analysis; gain in-depth problem solving and communication skills; and apply learning in real-world settings.

The majority of employers agree that having *both* field-specific knowledge & skills *and* a broad range of skills and knowledge is most important for college graduates to achieve long-term career success. In fact, 80% of employers agree that, regardless of their major, all college students should acquire broad knowledge in the liberal arts and sciences.

A second large study by the AAC&U (2021) surveyed nearly 500 executives and hiring managers. The report, *How College Contributes to Workforce Success*, details what employers view as most important in their workers.

Leading the list of what was “very important” for college graduates was their ability to work effectively in teams, critical thinking, application of knowledge to real-world settings, digital literacy, problem-solving skills, ethical judgment, communication through writing, and the ability to evaluate and use information in decision making. Scranton’s psychology program aims to cultivate all of these liberal education skills.

The study also underscored the value of hands-on learning during the college years. Completion of active and applied learning experiences in college gives job applicants a clear advantage in the

hiring process. So, plan to complete some community-based learning and internships during your Scranton years.

A third and final study to be considered here addressed what employers want specifically from psychology graduates. Landrum and Harrold (2003) surveyed 323 businesses and asked employers to rate the importance of 88 skills and abilities of potential psychology graduates. As presaged by previous studies, employers most highly valued:

- Listening skills
- Ability to work with others as part of a team
- Getting along with others
- Desire and ability to learn
- Willingness to learn new, important skills
- Focus on customers/clients
- Interpersonal relationship skills
- Adaptability to changing situations
- Ability to suggest solutions to problems
- Problem solving skills
- Ethical decision making
- Critical thinking
- Ability to see the big picture
- Flexibility/shifting gears
- Being able to identify problems
- Working smarter to improve productivity

Bottom-line advice? Develop and cultivate these transferrable skills and then ensure that they are communicated in your applications materials, such as your cover letter, resume, and letters of recommendation. Look again at the top-rated abilities; they are impressively consistent across studies and across methodologies.

In sum, 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 multitude of exciting careers. It is up to you to capitalize on the opportunities and to decide the direction.



A Plethora of Job Opportunities

Students often think only of mental health employment for those interested in psychological work, but as you have learned, the psychology degree prepares you for a variety of employment settings. Listed below are 20 agencies and settings in which B.S. psychology recipients have found interesting and challenging positions which utilize their knowledge of psychology.

1. Community Relations Officer: works either for business or government in promoting positive 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.
4. Urban Planning Officer: deals with city planning, renewal.
5. Personnel Administrator: works with employee relations, selection, promotions, etc.
6. Advertising Copywriter: researches audience and media.
7. Media Buyer: researches products and audiences to select effective media for advertising.
8. Health Educator: gives public information about health and disease.
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.
12. Customs Inspector: serves at international borders 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: publishers of psychological books often seek out psychology majors.
16. Opinion Survey Researcher: does opinion polls and interprets results.
17. Daycare Center Supervisor: supervises activities of preschool children.
18. Research Assistant: assists in the collection and analysis of data.
19. Laboratory Assistant: working with animal behavior research, especially primate laboratories.
20. Scientific Instrument Salesperson: opportunities in sales and development for companies specializing in psychology apparatus.

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





Gerard R. Roche Center for Career Development at The University of Scranton

The University of Scranton's Center for Career Development conducts an annual survey on post-graduation employment. Our B.S. psychology graduates in recent years are working as:

Administrative Case Manager	Paralegal
Assistant Teacher	Patient Services Coordinator
Behavioral Assistant	Pre-Law Fellow
Behavioral Health Technician	Preschool Teacher
Care Coordinator	Probation Officer
Case Manager	Program Administrator
Crisis Clinician	Project Coordinator
Direct Care Counselor	Recruitment Consultant
Drug/Alcohol Treatment Specialist	Registered Behavior Technician
Employment Specialist	Research Coordinator
Ensign in United States Navy	Researcher
Financial Advisor	Residential Counselor
Foreign Teacher	Residential Psychiatric Technician
Headhunter for Technology	School Behavioral Health Worker
Health and Benefits Analyst	Second Lieutenant in US Air Force
Healthcare Representative	Secret Service
Human Resources Coordinator	Special Education Associate
Instructor for Children with Autism	Teacher
Instructor/Counselor	Therapeutic Support Staff
Intensive Case Manager	ThrIve Program Coordinator
Investigator	Training and Development Specialist
IT Recruiter	Therapeutic Staff Support for Autism
Mental Health Worker	Volunteer for Jesuit Volunteer Corps
Operations Analyst	



XIII. Graduate School in Psychology

All psychology majors will complete, in their junior year, Career Development in Psychology (PSYC 390). That seminar will apply information on preparing for graduate school and gaining employment. In this section of the *Handbook*, we hit a few informational highlights on graduate school in psychology in the form of frequently asked questions (FAQs).

How many (more) years is graduate school?

Graduate school is post-baccalaureate or graduate education following receipt of your B.A. or B.S. A master's degree typically take 2 years of full-time study (2.5 years for a master's in school psychology). The Ph.D. typically takes 4 to 6 years; an additional year for the internship in clinical and counseling psychology. The Psy.D. averages one year less of full-time study than the Ph.D., largely due to not completing an original, empirical dissertation.

How does grad school differ from undergrad?

In a number of significant ways. First, the credit-hour load will be lighter in graduate school. Nine or 12 credits, rather than 15-18, per semester is a typical graduate load. You can, however, presume that each course will demand a fair amount of time. Second, you will take psychology courses almost exclusively.

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

Fourth, class sizes will be smaller. Some seminar courses will have as few as 5 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 among yourself, fellow students, and your professors due to the preceding points. Many people find that the tight psychological and social bonds formed in graduate school remain throughout their lives.

Must I go to graduate school?

Of course not. Graduate school in psychology is not the only option when one receives a bachelor's degree in psychology. Many students have found rewarding work with a B.S. or some advanced study in a related area outside psychology. See Section XI for additional careers with a bachelor's degree.

Should I go to graduate school?

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

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

Do you want a career with a higher income? People with doctorates are usually hired at a higher salary than other people.

Are you satisfied with the knowledge of psychology you have now? A B.S. gives you a foundation of knowledge. To gain further expertise and sharpen your talents, graduate school is the place to go. Of course, the benefits of an advanced degree only come after more effort and application of yourself.

How should I prepare for graduate school?

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

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

The following table reflects what graduate programs look for in psychology coursework. The Scranton psychology major will prepare you well for the requisite coursework. The message here is: get a strong background in psychology!

Psychology Course Prerequisites for Graduate Programs (N = 1,554)

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

Adapted from Norcross et al. Graduate study in psychology. *American Psychologist*.

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



Importance of Criteria in Admissions Decisions

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

Means are calculated where 1 = low importance, 2 = medium importance, and 3 = high importance. Adapted from Norcross et al. Graduate study in psychology. *American Psychologist*.

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

Do I need letters of recommendation?

Yes, usually three recommendations are required. Hence, students need to form relationships with several faculty members to secure strong letters of recommendation.

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

Also, a personal statement and a curriculum vitae (resume) 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." You will draft these documents during the Career Development in Psychology seminar.

What sort of credentials do I need?

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

The table presents the average acceptance rates for individual graduate programs, *not* the acceptance rate for the entire applicant pool in any given year. For example, an average of 40% of the applicants to any one cognitive psychology master's program will be accepted to that *particular* program, but approximately 70% of the entire applicant pool will be accepted to *some* program.

Average Program Acceptance Rates in Psychology
(% of students who apply and are accepted to a particular program)

Area	Master's	Doctoral
Clinical Psychology	39%	(table)
Cognitive Psychology	40%	11%
Counseling Psychology	57%	12%
Developmental Psychology	53%	14%
Experimental Psychology	38%	13%
Health Psychology	60%	25%
Industrial/Organizational Psychology	41%	15%
Neuroscience	45% ^a	11%
School Psychology	55%	29%
Social Psychology	33%	9%

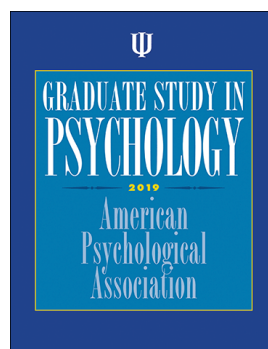
Source: American Psychological Association (2015).

The average acceptance rates to clinical psychology doctoral programs prove more complicated. Acceptance rates vary tremendously as a function of the practice–research continuum. As shown in the following table, acceptance rates at research-oriented clinical Ph.D. programs average 7%, whereas the corresponding figures are 14% for equal-emphasis Ph.D. and 16% for practice-oriented Ph.D. programs. University-based Psy.D. programs accept 40% of their applicants on average, and freestanding Psy.D. programs accept 50%. That's quite a range of acceptance rates—7% to 50%—all in APA-accredited doctoral programs in clinical psychology.

Average Acceptance Rates for APA-Accredited Clinical Psychology Programs

	Freestanding Psy.D.	University- based Psy.D.	Practice- oriented Ph.D.	Equal- emphasis Ph.D.	Research- oriented Ph.D.
Number of applications	227	163	155	160	183
Number of acceptances	108	58	18	16	12
Acceptance rate	50%	40%	16%	14%	7%

Source: Data from Norcross et al. (2014).



Average GPAs and GREs of Psychology Graduate Students

Measure	Master's Departments		Doctoral Departments	
	Required Mean	Actual Mean	Required Mean	Actual Mean
Graduate Record Examination				
Verbal	150	153	154	158
Quantitative	141	146	145	149
Verbal + Quantitative	290	300	300	308
Grade Point Average				
Overall	2.92	3.37	3.11	3.54
Psychology	3.05	3.48	3.17	3.66

Adapted from Norcross et al. Graduate study in psychology. *American Psychologist*.

A sampling of where our recent Psychology students are attending graduate school:

- Albany University (SUNY), PhD I/O Psychology
- Bryn Mawr College, MS Social Work
- Binghamton University, PhD Clinical Psychology, PhD Cognitive Psychology
- Bucknell University, MS Psychology
- Columbia University, EdM School Psychology
- Fairfield University, MS Clinical Mental Health Counseling
- Fordham University, MA School Psychology, MS Research Methodology
- Gallaudet University, PhD Clinical Psychology
- Georgetown University, JD Law
- Hofstra University, MS Clinical Mental Health Counseling
- Iowa University, PhD Cognitive Psychology
- Lehigh University, MS School Psychology, PhD Counseling Psychology
- Marquette University, PhD Clinical Psychology
- Marywood University, PsyD Clinical Psychology, MSW Social Work
- Memphis University, PhD Clinical Psychology
- Montclair State University, MS I/O Psychology, MS Clinical Psychology
- New York University, MSW Social Work, MA Applied Psychology
- Nova Southeastern University, MS Counseling
- Penn State Law, JD
- Penn State University, MS Speech-Language Pathology
- Philadelphia College of Osteopathic Medicine, MS School Psychology, DO Medicine
- Queens College, MS School Psychology
- Rutgers University, MS Rehab Counseling, MS Social Work, PhD Psychology
- Spalding University, PsyD Clinical Psychology
- St. John's University, PhD Clinical
- Stony Brook University, MS Human Resources Management
- Syracuse University, PhD School Psychology
- Temple University, MS Social Work, MS Occupational Therapy
- Tulane University, PhD Evolutionary Psychology
- University of Connecticut, MS Social Work
- University of Denver, PhD Psychology

- University of Hartford, PsyD Psychology
- University of Kansas, PhD Counseling Psychology
- University of Kentucky, PsyD Clinical Psychology
- University of Limerick (Ireland), MS Work & Organizational Psychology
- University of Minnesota, PhD School Psychology
- University of North Carolina, PhD School Psychology, MS School Counseling
- University of North Dakota, PhD Counseling Psychology
- University of Oregon, MS School Psychology
- University of Pennsylvania, MS Criminology
- University of Pittsburgh, MS Social Work
- University of Scranton, MS Mental Health Counseling, MS Applied Behavior Analysis
- University of Southern California, MA Occupational Therapy
- University of West Florida, MA Psychology
- Villanova University, MS Psychology
- Xavier University, PsyD Clinical Psychology



Modal Timeline

This section outlines the steps that should be taken in the respective years to gain admission to graduate school and increase the chances of gaining a fellowship or assistantship. This timeline is adapted from Norcross & Sayette (2024).

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 two to three months later with deadlines between February 1 and April 1. Please adapt this modal timeline to your specific circumstances.

Freshman and Sophomore Years

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

Junior Year

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

Application Year

June–August

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

August–September

1. Download program information and applications from websites.
2. Receive information packets and read through them.
3. Consult with advisors regarding graduate programs and faculty of interest.
4. Continue to study diligently for the GREs.
5. Update your curriculum vitae/resume.
6. Investigate possible financial aid opportunities.
7. Gather applications for salient fellowships and scholarships.
8. Register for the GRE Psychology Subject Test administered in October.

September–October

1. Take the GRE General Test (for first or second time), if required.
2. Create a short list of schools to which you will apply.
3. Choose the faculty at each school that most interest you.
4. Request a copy of your transcript and inspect it for any errors or omissions.
5. Begin first drafts of your personal statement and get feedback on it.
6. Calculate costs of applications and admission interviews and acquire the money for them.
7. Finalize the decision on whom you will ask for letters of recommendation.
8. Formulate your Plan B (i.e., what you will do if not accepted into a graduate program).

October–November

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

November–December

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

January–March

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

April–May

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

School Psychology Affiliation with the Philadelphia College of Osteopathic Medicine (PCOM)

The University of Scranton and PCOM maintain articulation agreements to provide qualified Scranton students with a quicker and smoother pathway to complete a Doctor of Psychology (Psy.D.) in School Psychology. These agreements allow Scranton students to complete their psychology bachelor's and their school psychology Psy.D. in less time. Up to 30 credits of PCOM graduate coursework count toward the Scranton undergraduate degree. That saves students money and time -- roughly equivalent to one year -- over the entirety of the two degrees.

The Agreement between PCOM and Scranton enables qualified Scranton students to:

- (1) Complete three years at the University and enter the Doctor of Psychology Program in School Psychology at PCOM (3+ early entry option); or
- (2) Complete the Bachelor of Science in Psychology at the University of Scranton and enter the Doctor of Psychology Program in School Psychology at PCOM (4+ option).

Students interested in taking advantage of these agreements should contact the Psychology Chairperson, Dr. Christie Karpiak (christie.karpiak@scranton.edu), for more information.



Accelerated M.S. in Applied Behavior Analysis (ABA) at the University of Scranton

Scranton's Psychology Department and the Applied Behavior Analysis (ABA) Program codirect an accelerated program that awards an in-person B.S. in Psychology and an online M.S. in ABA. This program began in Fall 2023.

Students interested in the Accelerated BS in Psychology and MS in Applied Behavior Analysis program may apply as sophomores or juniors to reserve a seat and maximize their program completion and academic advising. Admitted students will need to achieve GPAs of at least 3.5 after 64 semester hours, 3.4 after 80 semester hours, 3.3 after 96 semester hours, or 3.2 after 112 semester hours to be eligible for the accelerated program.

Psychology majors admitted to the accelerated M.S. program may begin taking the online graduate classes as early as the Fall semester of their junior year to maximize graduate credits during the undergraduate matriculation. They are permitted to take a maximum of 3 graduate credits per term while still classified as undergraduate students, up to a total of 12 graduate credits.

Following is the curriculum for the accelerated Psychology B.S. & Applied Behavior Analysis M.S.

	<i>Department and Number - Title of Course</i>	<i>Fall Cr.</i>	<i>Spr. Cr.</i>
First Year			
MAJOR - ELECT	PSYC 110 - (S) Fundamentals of Psychology — MAJOR ELECT - Psychology Elective	3	3
GE EP	PSYC 140 - (FYOC, FYDT) Current Topics in Psychological Science or another EP course	3	
GE QUAN	MATH - Mathematics Elective	3	
GE S/BH	S/BH ELECT - Social/Behavioral Elective		3
GE WRTG	WRTG 107 - (FYW) Composition		3
GE HUMN	HUMN ELECT - Humanities Elective		3
GE PHIL	PHIL 120 - Introduction to Philosophy — PHIL 210 - Ethics	3	3
GE FSEM	First Year Seminar		
		12	15
Second Year			
MAJOR	PSYC 211 - Research Methods and Statistical Analysis I — PSYC 212 - (EPW) Research Methods and Statistical Analysis II	4	4
MAJOR	MAJOR ELECT - Psychology Electives	3	3
GE ELECT	FREE ELECT - Free Electives		6
GE NSCI	NSCI ELECT - Natural Science Electives	3	3
GE S/BH	S/BH ELECT - Social/Behavior Science Elective	3	
GE HUMN	HUMN ELECT - Humanities Elective	3	
MAJOR	PSYC 390 - Career Development in Psychology		1
		16	17
Third Year			
MAJOR	MAJOR ELECT - Psychology Electives	6	9
GE HUMN	HUMN ELECT - Humanities Elective	3	
GE T/RS	T/RS 121 - (P) Theology I — T/RS 122 - (P) Theology II	3	3
ABA MS	ABA 605 - Philosophical Underpinnings of Applied Behavior Analysis — ABA 600 - Concepts and Principles of ABA	3	3
		15	15
Fourth Year			
MAJOR	MAJOR ELECTIVE - Psychology Elective	3	
MAJOR	PSYC 490 - Senior Seminar I — PSYC 491 - (EPW) Senior Seminar II	1.5	1.5
GE PHIL or T/RS	PHIL ELECT- Philosophy or T/RS ELECT - Theology Elective	3	
GE HUMN	HUMN ELECT - Humanities Elective		3
GE ELECT	FREE ELECT - Free Electives	3	12
ABA MS	ABA 640 - Measurement and Experimental Design in ABA	3	
		13.5	16.5

Fifth Year					
		SU 1	Fall	Spring	SU 2
ABA MS	ABA 590 - Capstone or ABA 599 - Thesis	3			3
ABA MS	ABA ELECT - ABA Elective	3			
ABA MS	ABA 610 - Ethics in Applied Behavior Analysis		3		
ABA MS	ABA 615 - Behavior Assessment in Applied Behavior Analysis		3		
ABA MS	ABA 625 - Behavior-Change Procedures in Applied Behavior Analysis		3		
ABA MS	ABA 635 - Personnel Supervision and Management Interventions			3	
ABA MS	ABA 545 - Basic Behavior Analysis			3	
ABA MS	ABA ELECTIVE - ABA Elective				3
		6	9	6	6
					Total: 147 Credits



**The Association for Behavior Analysis International has verified the MS in ABA core courses as meeting the coursework requirement for eligibility to take the Board Certified Behavior Analyst® examination. Students will also need to meet additional requirements before they can be deemed eligible to take the examination.*

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 standard recommendation forms:

Academic performance	Judgment/common sense
Speaking skills	Interpersonal abilities
Organizational skills	Integrity
Originality/resourcefulness	Responsibility/dependability
Interest/enthusiasm	Writing skills

Most of these dimensions refer to faculty-student interactions outside of the classroom, not to your course grades. Many a bright student has sabotaged their 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.

- **Join psychology organizations.** The Psychology Club is open to all psychology majors and minors. The Association for Psychological Science Student Caucus holds meetings and activities with the Psychology Club. Psi Chi, the international psychology honor society, is open to juniors and seniors who meet national criteria for grades.
- **Conduct research with professors.** Students may work with a faculty member in planning studies, collecting data, analyzing the results, and the like. Feel free to approach any professor regarding his/her research interests and projects.
- **Become a Teaching Assistant.** See Section IX on the multiple advantages of doing so!
- **Affiliate with APA or APS.** You can join the American Psychological Association (APA) as a student affiliate 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*.
- **Show up for psychology events.** Demonstrate your enthusiasm and commitment to your future career. Enough said!
- **Attend University functions.** Be seen and see other students/faculty at workshops, meetings, talks, plays, and other university functions.

**GET !
INVOLVED!**

XV. Additional Resources

- American Psychological Association. *Careers in psychology*. Online at www.apa.org/education-career/guide/careers
- American Psychological Association. (2023). *Graduate study in psychology*. Author.
- Bolles, R. N. (2022). *What color is your parachute?* Penguin Random House.
- Kuther, T. L., & Morgan, R. D. (2020). *Careers in psychology: Opportunities in a changing world* (5th ed.). Sage.
- Norcross, J. C., & Kuhle, B. X. (2011). What are your chances? New probabilities of admission into graduate psychology programs. *Eye on Psi Chi*, 15, 20-22.
- Norcross, J. C., & Sayette, M. A. (2024). *Insider's guide to graduate programs in clinical and counseling psychology*. Guilford.
- Society for Industrial and Organizational Psychology. (2023). *Graduate training programs in I/O psychology and related fields*. Online at www.siop.org/Events-Education/Graduate-Training-Program

Advising Resources

The University of Scranton features numerous advising and mentoring resources. Please seek out all that meet your needs. These include the following 10 resources:

1. Freshman seminar
2. Academic Advising Centers
3. This *Psychology Handbook*
4. Assigned psychology advisor
5. Additional psychology faculty
6. Career Development in Psychology Seminar
7. Published resources (as above, in the lounge and online)
8. Counseling Center
9. Our Psychology webpage at www.scranton.edu/academics/cas/psychology
10. Center for Career Development

Graduating psychology majors at the University of Scranton complete the Senior Seminar II in which they provide written advice in letters to incoming psychology freshmen. Quantitative analyses of 101 of these letters produced the following frequent advice from those who have already "been there and done that."

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



Most Frequent Advice Rendered by Scranton's Psychology Graduates

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

Handbook Quiz

With this *Handbook*, challenge yourself to answer the following dozen questions. If you are still uncertain about any of these matters, then please review the relevant sections of the *Handbook* and speak to your psychology advisor.

1. Which courses can go into your 30 free electives?
2. What is the *minimum* number of core eight psychology courses required for a major?
3. When is the earliest a student can get involved in research?
4. What field experiences/internships does the Psychology Department offer for academic credit?
5. Beyond the field experiences courses, how can I obtain applied experiences in my field?
6. What are the 4 avenues to pursue student research in psychology?
7. What are REUs?
8. How can psychology students become Teaching Assistants?
9. Which psychology elective courses are most appropriate for someone with my interests?
10. What are the 3 student organizations in the Psychology Department?
11. Which student characteristics and skills are most valued by employers?
12. What are several non-clinical positions sought by B.S. psychology recipients?

XVI. My Questions & Notes

Now that you have consumed the contents of this *Psychology Handbook* and familiarized yourself with the University of Scranton's Psychology website, please scribble below two critical types of information: questions for your academic advisors, and to-do notes (action plans).

Questions for My Advisors

My To-Do Notes (Action Plan)

Ψ

Catch the Fever!

Ψ