

Doctoral Study in Applied Biopsychology

Department of Psychology
University of New Orleans
College of Sciences
New Orleans, LA

Applied Biopsychology is an emerging area of psychology concerned with the application of biopsychology to problems of human behavior. Applied Biopsychology as a discipline has grown out of a need for scientists who are thoroughly trained in the basic content areas of behavioral science and research methodology AND who have applied training enabling them to translate that basic knowledge into practical technologies and solutions.

The Applied Biopsychology program shares with the Department as a whole the commitment to training applied scientists who can contribute to the science of psychology by conducting innovative programmatic research and who can develop and implement practical applications based on this research.

The academic and scientific orientation of our graduates is a function of the emphasis placed on research in the Applied Biopsychology Program. Each semester students are expected to be involved in research under the guidance of a faculty member. Furthermore, much of the course work in the curriculum is designed to provide students with the educational background to conduct research independently upon successful completion of the program. This research emphasis is explicit and was not designed to detract from the applied aspects of the program but to enhance it in a number of important ways.

Training scholars with these types of applied skills requires not only course work and research, but also practical experience in a variety of applied settings. UNO's urban location maximizes the opportunity for links with the medical and human services community that provide this practical experience through practica and internships.

Students completing this program are encouraged to be leaders and innovators in their field. They are trained to implement existing approaches in the practice of psychology and to contribute to the advancement of the practice of applied biopsychology. Finally, the scientific philosophy of this program prepares students to critically examine the practice of psychology by themselves and by other psychologists, as well as advocate for improvements in the application of psychology based on scientific principles.

Some of our graduates have obtained employment in colleges and universities where research and teaching are emphasized. Other graduates have obtained employment in non-academic settings in which research is tied directly to practical problems of health and human service. Finally, some graduates have accepted positions that emphasize service delivery. These outcomes emphasize the breadth of training and experience available in the Applied Biopsychology Program at the University of New Orleans as well as the diversity of interests of those student who have chosen to study here.

Curriculum

General Core Curriculum. The training philosophy endorsed by the Applied Biopsychology Program emphasizes a scientific approach to understanding both normal and disordered behavior. The edification required by the Biopsychology Program reinforces this orientation by training students in basic psychological methods through a general fundamental curriculum shared by students in the Developmental program. These include a two course sequence in Advanced Statistics, (Psych 6311 & Psych 6312), Advanced Learning (Psych 6350), a seminar on Professional Problems and Ethics (Psych 6050), Applied Biopsychology (Psych 6801), Psychopathology (Psych 6550), and four one-hour seminars on Professional Issues (Psych 6091).

Applied Biopsychology Core Curriculum. The general psychological foundation is complemented by an applied biopsychological core, which focuses more specifically on the neurobiological underpinnings of behavior. Within this biopsychology core, students take a number of classes that focus on the functioning of the nervous system at various levels of observation, from the molecular to that of the behaving organism. These include a two semester sequence in the Fundamentals of Applied Biopsychology, Psychopharmacology, and Advanced Learning.

Advanced Electives. Through the general and applied biopsychology core all students are provided with a well-rounded background in Applied Biopsychology. However, the curriculum also allows for considerable flexibility by the student to tailor the coursework to a particular career choice. Biopsychology electives allow students to choose classes that enhance their knowledge of psycho-physiology, behavioral medicine, and neuropsychology, as well as areas covered in advanced seminars in statistics, psychological assessment, and in current topics in biopsychology.

Minor Area of Study. Students are also required to design a minor course of study that is outside of their applied biopsychological emphasis. The minor requires at least 9 semester hours of coursework within some clearly defined content area (e.g. developmental psychology, program evaluation, advanced assessment, advanced methodology, statistics) and may include courses that are taken outside of the psychology department. The minor must

be approved by the student's doctoral committee which includes at least one faculty member from the minor area..

Research Requirements. All students must be involved in research throughout their time in the program. Each semester that students are not taking either Thesis or Dissertation hours, students must be enrolled in an Independent Research course (Psych 6090). Also, as part of the requirements for the Masters of Science degree, all students must complete a thesis that is based on their own original research. Since the thesis is often one of the first attempts by students in conducting their own original research, students work closely with their major professor on this project.

An integral part of the requirements for the Ph.D. degree is the successful completion of the dissertation, another original research project. However, students are expected to function much more independently on their dissertation. The dissertation demonstrates students' mastery of research techniques, ability to conduct original research, and skill in formulating conclusions that in some way enlarge upon or modify existing psychological theory. The dissertation is expected to make a substantial contribution to the scientific literature.

Practicum Experiences. In addition, students are required to take four semesters of supervised practicum at an approved site, that is supervised by a biopsychologist. These placements are selected to provide the students with diverse experiences in the practice of biopsychology under the mentorship of a practicing biopsychologist.

Qualifying Exam. A complete description of the departmental requirements for the doctoral programs in psychology is available in the departmental "Rules, Regulations, and Forms" packet. Several methods for assessing competency are required at various stages of the program. One of these requirements is the qualifying exam, in which students must demonstrate competency in at least four content areas: 1) biological basis of behavior, 2) cognitive-affective basis of behavior, 3) social basis of behavior, and 4) individual differences. Documentation of competency within these four areas is required as part of most states' psychology licensure guidelines.

Sample Course of Study

Year 1

Fall		Spring	
6311 Advanced Statistics I	3	6312 Advanced Statistics II.	3
6550 Psychopathology	3	6050 Professional Issues/Ethics	3
6801 Fund. of Applied Biopsyc I	3	6802 Fund. of Applied Biopsyc II	3
6091 Professional Issues Seminar	1	6091 Professional Issues Seminar	1
6090 Independent Research	3	6090 Independent Research	3
Thesis Prospectus			

Year 2

Fall		Spring	
6350 Advanced Learning	3	6810 Psychopharmacology	3
6091 Professional Issues Seminar	1	6091 Professional Issues Seminar	1
7000 Thesis Research	3	7000 Thesis Research	3
Thesis Defense			

Year 3

Fall		Spring	
6101 Applied Developmental Psych I	3	Applied Bio. Elec./Minor/Gen. Elec.	3
6891 Applied Bio. Practicum	3	6891 Applied Bio. Practicum	3
6090 Independent Research	3	6090 Independent Research	3
Applied Bio. Elec./Minor/Gen. Elec.	3	Applied Bio. Elec./Minor/Gen. Elec	3
Qualifying Exam		Dissertation Prospectus	

Year 4

Fall		Spring	
Applied Bio. Elec./Minor/Gen. Elec.	3	Applied Bio. Elec./Minor/Gen. Elec.	3
Applied Bio. Elec./Minor/Gen. Elec.	3	Applied Bio. Elec./Minor/Gen. Elec.	3
6891 Applied Bio. Practicum	3	6891 Applied Bio. Practicum	3
7050 Dissertation Research	3	7050 Dissertation Research	3
Dissertation Defense			

Year 5 (optional)

Fall		Spring	
7891 Applied Biopsych. Internship	6	7891 Applied Biopsych. Internship	6

A Sample of Recently Offered Advanced Biopsychology Courses

- ◆ Neuropsychology
- ◆ Psychophysiology
- ◆ Behavioral Genetics
- ◆ Behavioral Medicine
- ◆ The Biopsychology of Pain

Faculty

Kevin W. Greve (Ph.D., 1991, University of Florida)
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Research interests: Failure to recover after injury or illness is a significant health problem that is closely tied to a range of psychosocial factors including personality and coping styles, psychopathology, stress, work satisfaction, and financial factors. For the last 7 years Dr. Greve's research group has published extensively on the issue of response bias, symptom exaggeration, and malingering, one set of factors associated with poor outcome in a variety of conditions.

Ongoing and future research aims at better understanding the influence of social factors, personality, and psychopathology on outcome following illness or injury. This current focus continues Dr. Greve's long-time study of psychological and neuropsychological assessment and psychometrics. He also retains his interest in cognitive neuropsychology and the rare cases whose analysis from a cognitive and neuroanatomical perspective can shed new light on the relationship between the brain and behavior.

Research resources include an active research team of Ph.D.-level psychologists, graduate, and undergraduate students. Graduate students are actively involved in research from the beginning of their tenure in the Department and most publish every year. Resources also include a large clinical psychology / clinical neuropsychology practice and access to local pain clinics.

Selected Recent Publications

- Greve, K. W., Ord, J., Curtis, K. L., Bianchini, K. J., & Brennan, A. (*in press*). Detecting Malingering in Traumatic Brain Injury and Chronic Pain: A Comparison of Three Forced-Choice Symptom Validity Tests. *The Clinical Neuropsychologist*.
- Ord, J. S., Greve, K. W., & Bianchini, K. J. (*in press*). Using the Wechsler Memory Scale-III to Detect Malingering in Mild Traumatic Brain Injury. *The Clinical Neuropsychologist*.
- Larrabee, G. J., Greiffenstein, M. F., Greve, K. W., & Bianchini, K. J. (2007). Refining Diagnostic Criteria for Malingering. In G. J. Larrabee (Ed.), *Evaluation of Malingering in the Neuropsychological Examination* (pp. 334-371). New York: Oxford University Press.
- Greve, K. W. & Bianchini, K. J. (2007). Detection of Cognitive Malingering with Tests of Executive Function. In G. J. Larrabee (Ed.), *Evaluation of Malingering in the Neuropsychological Examination* (pp. 171-225). New York: Oxford University Press.
- Greve, K. W. et al. (2006). The Prevalence of Cognitive Malingering in Persons Reporting Exposure to Occupational and Environmental Substances. *NeuroToxicology*, 27, 940-950.
- Bianchini, K. J., Curtis, K. L., & Greve, K. W. (2006). Compensation and Malingering in Traumatic Brain Injury: A Dose-Response Relationship? *The Clinical Neuropsychologist*, 20, 831 - 847.
- Bianchini, K. J., Greve, K. W., & Glynn, G. (2005). On the Diagnosis of Malingered Pain-Related Disability: Lessons from Cognitive Malingering Research. *The Spine Journal*, 5, 404-417.
- Greve, K. W., Stickle, T. R., Love, J. M., Bianchini, K. J., & Stanford, M.S. (2005). Latent Structure of the Wisconsin Card Sorting Test: A Confirmatory Factor Analytic Study. *Archives of Clinical Neuropsychology*, 20, 355-364.
- Greve, K. W. et al. (2005). Psychological Evaluation of the Emotional Effects of a Community Toxic Release. *Journal of Occupational and Environmental Medicine*, 47, 51-59.
- Greve, K. W. & Bianchini, K. J. (2004). Setting empirical cut-offs on psychometric indicators of negative response bias: a methodological commentary with recommendations. *Archives of Clinical Neuropsychology*, 19, 533-541.
- Greve, K. W. et al. (2002). The neurobehavioral consequences of St. Louis Encephalitis infection: A case report. *Brain Injury*, 16, 917-927.
- Bianchini, K. J., Mathias, C. W., & Greve, K. W. (2001). Symptom Validity Testing: A Critical Review. *The Clinical Neuropsychologist*, 15, 19-45.

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Research interests: Dr. LaHoste's research program is unique in that it seeks to understand the biological bases of behavior at several levels of organization from molecular genetics to behavior as well as many of the levels in between (gene and protein expression, chemical neuroanatomy and physiology). The goal of this strategy is to obtain a comprehensive view of the complexity of normal and pathological human behavior. This strategy and the techniques involved have been applied mostly to behaviors that are profoundly influenced by the neurotransmitter dopamine. Not only are the effects of dopamine profound, but they extend to a remarkably wide range of behaviors including cognition, attention, motivation, drug addiction, and the translation of thought into movement.

Dr. LaHoste's research is "translational," or applied, in nature. His most recent findings promise to lead directly to a novel, superior treatment for schizophrenia and late-stage Parkinson's disease. These findings were prompted by behavioral results that led to the use of molecular genetics by which Dr. LaHoste co-discovered a novel gene. The function of this gene was, in turn, tested in behavioral models (genetically engineered mice). Thus, although molecular techniques are used, behavior represents the start-point and the end-point of all of Dr. LaHoste's research.

In earlier work, Dr. LaHoste was the first to discover the link between a dopamine-related gene and Attention Deficit Hyperactivity Disorder (ADHD). This finding has been replicated in many laboratories world-wide, and the two original papers describing this discovery have been cited over 500 times in scientific journals. The previously unknown link between this gene and ADHD has had an important impact on current theories and represents a major new avenue for the development of better drugs in the treatment of this childhood disorder.

Selected Recent Publications

- Nolan EB, Harrison LM, LaHoste GJ & Ruskin DN. Behavioral synergism between D₁ and D₂ dopamine receptors in mice does not depend on gap junctions. (2007) *Synapse* 61:279-287.
- Harrison LM & LaHoste GJ. (2006) *Rhes*, the Ras Homolog Enriched in Striatum, is reduced under conditions of dopamine supersensitivity. *Neuroscience* 137: 483-492.
- Ruskin DN, Anand R & LaHoste GJ. (2006) Menthol and nicotine oppositely modulate body temperature in the rat. *Eur J Pharmacol* 559:161-164.
- Chen C, Hardy M, Ruskin DN, Zhang J, LaHoste GJ & Bazan NG. (2006) Altered NMDA receptor trafficking contributes to sleep deprivation-induced hippocampal synaptic and cognitive impairments, submitted. *Biochem Biophys Res Commun*. 340: 435-40.
- LaHoste GJ, Henry BL & Marshall JF. (2000) Dopamine D₁ receptors synergize with D₂ but not D₃ or D₄ receptors in the striatum without involvement of action potentials. *J Neurosci* 20: 6666-6671.
- LaHoste GJ, Swanson JM, Wigal S, Glabe C, Wigal T, King N & Kennedy JL. (1996) Dopamine D4 receptor gene polymorphism is associated with attention deficit-hyperactivity disorder. *Molecular Psychiatry* 1: 128-131.
- LaHoste GJ, Yu J & Marshall JF. (1993) Striatal Fos expression is indicative of dopamine D1/D2 synergism and receptor supersensitivity. *Proc Natl Acad Sci USA* 90: 7451-7455.
- LaHoste GJ & Marshall JF. (1992) Dopamine supersensitivity and D1/D2 synergism are unrelated to changes in striatal receptor density. *Synapse* 12: 14-26.

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Research Interests: Attention-Deficit/Hyperactivity Disorder (ADHD) is a common and costly childhood syndrome with a prevalence rate of 3-5% and a sex-biased prevalence rate of 3:1 (boy:girl). My research utilizes a translational perspective to examine developmental pathways to childhood psychopathology with an emphasis on temperament and personality traits, executive function, and biological influences, particularly gonadal hormones and dopaminergic genes. I am especially interested in mechanisms that may lead to sex differences in the expression of common child externalizing disorders, especially ADHD, but also Oppositional-Defiant Disorder, Conduct Disorder, and substance use disorders. Because these conditions overlap so extensively, they cannot readily be studied in isolation. The main question my work addresses is: What biological and psychological mechanisms modulate the developmental pathways to childhood externalizing disorders and influence their taxonomic distinctions?

Ongoing and future work will examine relations between neuropsychological executive function (e.g., response inhibition) and temperament and personality traits (e.g., effortful control) in regard to developmental psychopathology with a particular focus on sex differences. More exploratory work will examine the relationship between prenatal hormone exposure and dopaminergic genes in the development of childhood externalizing disorders. Finally, through the above avenues, it is hoped that individual pathways to psychopathology will be elucidated.

Participating students will have the opportunity to gain expertise in diverse, translational research methodology, including child development paradigms and coding systems, advanced clinical diagnostic assessment, neuropsychological and cognitive assessment, and advanced statistics.

Selected Recent Publications

- Martel, M.M., Gobrogge, K.L., Breedlove, S.M., & Nigg, J.T. (in press). Evidence for organizational effects of steroid hormones on childhood ADHD in boys but not girls. *Behavioral Neuroscience*.
- Martel, M.M., Nigg, J.T., & Lucas, R. (in press). Trait Mechanisms in Youth with and without Attention-Deficit/Hyperactivity Disorder. *Journal of Research in Personality*.
- Nigg, J.T., Knottnerus, G.M., Martel, M., Nikolas, M., Cavanagh, K., Karmaus, W., & Rappley, M.D. (in press). Low blood levels associated with clinically diagnosed Attention Deficit Hyperactivity Disorder (ADHD) and mediated by weak cognitive control. *Biological Psychiatry*.
- Martel, M., Lucia, V., Nigg, J., & Breslau, N. (2007). Sex differences in the relations among low birth weight, neuropsychological executive function, and attention problems. *Journal of Abnormal Child Psychology*, 35(1), 87-96.
- Martel, M.M., Nigg, J.T., Wong, M.M., Fitzgerald, H.E., Jester, J.M., Puttler, L.I., Glass, J.M., Adams, K.M., Zucker, R.A. (2007). Child and adolescent resiliency, regulation, and executive functioning in relation to adolescent problems and competence in a high-risk sample. *Development and Psychopathology*, 19(2), 541-563.
- Martel, M.M., Nikolas, M., & Nigg, J.T. (2007). Executive function in adolescents with ADHD. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(11), 1437-1444.
- Martel, M.M. & Nigg, J.T. (2006). Child ADHD and personality/temperament traits of reactive and effortful control, resiliency, and emotionality. *Journal of Child Psychology & Psychiatry*, 47(11), 1175-118.

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The Stress Physiology in Teens (SPIT) laboratory seeks to understand the development of psychopathology by enhancing our understanding of psychobiological risk factors and inter-related social contextual factors in adolescents. This interdisciplinary research examines both short term responses to stressors such as laboratory challenges, as well as changes that are not necessarily temporary but can consistently or even permanently change an individual's biology. Dr. Shirtcliff's focus is on hormones because the endocrine system is stress responsive, often mirroring an individual's social environment. Because this research involves adolescent humans, Dr. Shirtcliff uses a variety of noninvasive tools to investigate psychobiological development, primarily saliva. In addition to cortisol, other biological measures that are responsive to the social environment are regularly examined, including testosterone, estradiol and dihydroepiandrosterone (DHEA) as well as measures of immune competence.

The SPIT lab investigates how developmental trajectories are established and activated across development. The focus is on adolescence because it represents a period of intensification, where many maturational processes that took place earlier in development coalesce. Adolescents experience many biological changes as they undergo puberty, but these changes are not new events. Their development is shaped and organized by earlier events and stressors, particularly their hormones. Biological changes are just one part of a greater suite of changes across several domains, making this developmental stage one of the most exciting times to conduct interdisciplinary research. This is also one of the first times that early psychobiological vulnerabilities are evinced as overt psychopathology or health problems. Rarely does stress lead to a specific type of health issue, however, so Dr. Shirtcliff maintains a broad definition of developmental psychopathology, does not focus on a single diagnostic spectrum, and considers symptoms ranging from normative to clinical impairment. Ultimately, the goal of understanding the interplay between stress exposure, biological trajectories and adolescent development in the SPIT lab is to understand why certain individuals will develop psychopathology.

Selected Recent Publications

- Shirtcliff, E. A., Dahl, R. E., Pollak, S. D., (in press). Pubertal Development: Correspondence between hormonal and physical development. *Child Development*.
- Wisner-Fries, A., Shirtcliff, E. A., Pollak, S. D., (in press). Neuroendocrine dysregulation following early social deprivation in children. *Developmental Psychobiology*.
- Shirtcliff, E. A., Zahn-Waxler, C., Klimes-Dougan, B., & Slattery, M. J. (2007). Salivary dehydroepiandrosterone responsiveness to social challenge in adolescents with internalizing problems. *The Journal of Child Psychology and Psychiatry*, 48, 580-591.
- Shirtcliff, E. A., Granger, D. A., Booth, A., & Johnson, D. (2005). Low salivary cortisol levels and externalizing behavior problems in youth. *Development and Psychopathology*, 17, 167-184.
- Granger, D. A., Shirtcliff, E. A., Zahn-Waxler, C., Usher, B., Klimes-Dougan, B., & Hastings, P. (2003). Salivary testosterone diurnal variation and psychopathology in adolescent males and females: individual differences and developmental effects. *Development and Psychopathology*, 15, 431-449.

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Research Interests: Dr. Soignier's Behavioral Neuroscience Laboratory focuses on the neuroscience of chronic pain and pain treatment. As a member of the Pain Research Group, and inter-university collaboration with pain researchers from LSU Health Sciences Center, Tulane Medical School and Xavier University, his laboratory has tremendous resources including computer-controlled conditioned place preference and self administration apparatus, state of the art microscopes, and protein assay equipment.

There are three intersecting lines of research Dr. Soignier is pursuing. Through basic science models he examines injury-induced alterations in sensory systems that provide clues to the etiology of pain. This information guides his efforts in the development of novel pharmacological interventions for chronic pain. Finally Dr. Soignier hopes to maximize the effectiveness of pharmacological treatment of pain by informing clinical providers about drug interactions, and about the appropriate use of opiate medications.

The research in Dr. Soignier's laboratory is true translational research – it is guided by clinical problems and our findings directly inform clinical practice – from the bedside to the bench and back. His work is focused on clinically relevant models of chronic pain. These include the formalin, carrageenan, and complete Freund's adjuvant (CFA) models, ostiolytic cancer cell inoculation and several permutations of neuropathic injury.

Selected Recent Publications

- Soignier, RD, Vaccarino, AL, Fanti, KA, Wilson, AM and Zadina, JE (2004). Analgesic tolerance and cross-tolerance to i.c.v. endomorphin-1, endomorphin-2 and morphine in mice. *Neurosci-Lett*, 366(2), 211-4
- Gould, HJ 3rd, England, JD, Soignier, RD, Nolan, P Minor, LD, Lui ZP, Levinson, SR, Paul, D (2004). Ibuprophen blocks changes in Nav 1.7 and 1.8 sodium channels associated with complete freund's adjuvant-induced inflammation in the rat. *J Pain*, 5(5), 270-80
- Wilson, AM, Soignier, RD, Zadina, JE, Kastin, AJ, Nores, WL, Olson, RD, Olson GA (2000). Dissociation of analgesic and rewarding effects of endomorphin-1 in rats. *Peptides*, 21(12), 1871-4.
- Soignier RD, Vaccarino, AL, Brennan, AM, Kastin, AJ, and Zadina, JE (2000). Analgesic effects of endomorphin-1 and endomorphin-2 in the formalin test in mice. *Life Sci*, 67(8), 907-12.
- Bell RL, Soignier, RD, Olson, RD, Vaccarino, AL (1998). Reduction of stress-induced analgesia following ethanol exposure in mice. *Life-Sci*, 63(9), 731-6.
- Vaccarino, AL, Nores, WL, Soignier, RD, Olson, RD (1997). The role of corticosterone in the blockade of tolerance to morphine analgesia by formalin-induced pain in the rat. *Neurosci Lett*, 232(3), 139-42.

Funding

Students are typically funded through a variety of assistantships available through the department. The most common source of funding is for Biopsychology students is a research assistantship, but teaching assistantships are also available. The teaching assistantship requires that the student work twenty hours each week. Research assistantships are financed by faculty grants and awards from the state or the university. The amount of these stipends varies depending upon the source of funding. All students enrolled in the 2002-2003 school year received financial support though one of these sources and the department is committed to maintaining this level of support

Admission

The Applied Biopsychology program plans to admit 4 to 6 new students each year in the foreseeable future. Adequate preparation in psychology is required, which usually includes introductory psychology, statistics, experimental design, and additional psychology courses for a total of 21 hours, but each case will be examined individually, and strong preparation in a closely related area such as neuroscience or biology will also be considered where appropriate.

The UNO Graduate School requires for admission a) a minimum 2.5 GPA for all undergraduate work and a 3.0 GPA for all graduate and post-bachelor work, b) satisfactory academic standing at the last university or college attended, and c) satisfactory test scores on the GRE (Verbal + Quantitative of at least 1000). In addition, the sum of the test scores on the GRE Verbal plus Quantitative, divided by 400 and added to the applicant's GPA (on a four point scale) must equal 6.1 or above.

Students who meet these UNO minimum requirements must still meet the admission requirements of the Department of Psychology and the Applied Doctoral Program. Students admitted to the Department's doctoral programs typically have GRE scores exceeding 1150 (Verbal + Quantitative) and undergraduate GPA's of 3.2 or higher. For example, the twelve students admitted for the 2000-01 academic year had a mean GRE score of 1233 and a mean undergraduate GPA of 3.64. The continuing students in the program have a mean GRE score of 1194 and mean undergraduate GPA of 3.51. GRE scores and GPA are not the sole criteria considered for admission.

The quality of the applicant's undergraduate curriculum, his or her letter of intent, and letters of recommendation are strongly considered in admission decisions. In examining all of these sources of information, the applicant's research aptitude and the match between the applicant's career goals and the training mission of the program are critical considerations. Finally, for a student to be admitted, a faculty member must be willing to serve as the student's major professor upon admission. Because the department is strongly committed to enhancing cultural diversity within the profession of psychology, applications from minority students are strongly encouraged.

Admissions are only made for students enrolling in the Fall of each academic year. Completed applications must be on file by February 15th for initial acceptance decisions for the following Fall. Applicants filing after that date may still be considered for admission but typically have a markedly reduced chance of acceptance. The University application fee is \$20.00 and an additional \$30.00 late fee is charged for applications made after July 1st.

For more detailed information on admission procedures, including on-line application procedures, applicants can visit the departmental web site at <http://www.uno.edu/~psyc> or contact the department's graduate coordinator:

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The Department of Psychology

Like the university itself, the Department of Psychology is over 40 years old. It is part of the College of Sciences and typically has between 15 and 18 faculty members, over 600 undergraduate majors, and between 30 and 40 graduate students. The faculty are committed to teaching on both the undergraduate and graduate level. In addition, they are all active scholars contributing in various ways to the profession of psychology, such as publishing original research in peer reviewed journals, serving on editorial boards for scientific journals, serving on grant review panels for various public and private funding agencies, and playing leadership roles in various national and regional psychological societies.

The quality of the program was recognized in 1994 by an accreditation review by the American Association of Applied and Preventive Psychology (AAPP), the applied arm of the American Psychological Society (APS), which established an accreditation process for programs in applied psychology. In 1995, the National Research Council (NRC) identified UNO as the only Department of Psychology in American to earn its maximum rating increase for quality.

Further support for the quality of the department comes from its history of attracting external funding for faculty research. Over the 2002-2003 academic year, the department had \$10.2 million in grants and contracts in force and another \$7.3 million in funding proposals submitted. In addition to their many scholarly activities within the Department, many faculty members have adjunct appointments in various institutions around the New Orleans area, such as at the New Orleans Veteran's Administration Hospital and at LSU and Tulane Medical Centers.

The overall training goal of the department's doctoral program is to produce well-trained applied scientists who, depending on their career goals, are capable of teaching, conducting research, and providing professional service delivery. The department offers two specializations for their doctoral program: Applied Developmental Psychology and Applied Biopsychology. Students have substantial contact with faculty in both programs through classes, graduate committees, and other formal and informal departmental activities. Students in both programs take many classes together and often work on joint research projects.

The department houses a number of laboratories focusing on specific areas of applied psychology research. These include laboratories equipped to study cognitive physiology, child psychopathology, behavioral neuroscience, memory and cognition, parenting, parent-child interactions, and image processing. The department also houses and operates the Psychology Clinic. This clinic is organized to provide students in either of the doctoral specializations with supervised experience in providing many types of psychological services in which departmental faculty have a particular expertise.

In addition to these in-house facilities, the department maintains strong alliances with many mental health agencies throughout the New Orleans metropolitan area to enhance the training of graduate students by serving as applied practicum placements, by providing access to applied research projects, and by allowing students to develop collaborative relationships that enhance the student's professional identity.

The University of New Orleans

The University of New Orleans was established by the Louisiana Legislature in 1956 to bring public-supported higher education to the state's largest urban community. Since its opening in 1958 to 1,500 Freshman, UNO has expanded to current enrollment levels of over 17,000 students in over one hundred degree programs. It is one of the most ethnically diverse major public universities in the nation. Over 40% of the student body are ethnic minorities, 3% are international students, and over half are non-traditional students with respect to age (25 years and older). UNO is a member of the Great Cities' Universities Coalition, a group of the best and most prestigious urban universities throughout the country, committed to keeping our metropolitan areas educationally strong, economically vibrant, and socially and culturally rich.

While maintaining its commitment to serving the educational and cultural needs of the New Orleans metropolitan area, UNO has become a premier institution of higher education that attracts students from throughout the world. During the 2000-2001 school year, UNO met the requirements for *Carnegie Doctoral Intensive* status with over 51 graduate degree programs and over \$40 million in extramural grants and contracts in force each year. The UNO Research and Technology Park has recently been established at a thirty-acre site adjacent to campus that will be the home of the Center for Energy Resources Management, the Navy Personnel Information Systems Facility, and the Louisiana Office of Public Health Laboratories.

The scenic lakefront main campus, where the Department of Psychology is located, and the dynamic culture of the city of New Orleans combine with UNO's many educational opportunities to create an exciting and enjoyable learning environment for students. Where else in the country could you become an aficionado of jazz music, a connoisseur of Creole cuisine, and a regular Mardi Gras reveler, all while earning your Ph.D. in psychology ?

More information on the Applied Biopsychology Program can be obtained on the Department of Psychology's web site at <http://www.uno.edu/~psyc/> or by contacting the director of the program:

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