



WAKE FOREST

UNIVERSITY

GRADUATE SCHOOL *of* ARTS & SCIENCES

WORLD-CLASS SCHOLARSHIP FUELED BY AN *INTERDISCIPLINARY, COLLABORATIVE* ENVIRONMENT
graduate.wfu.edu



WAKE FOREST UNIVERSITY

GRADUATE SCHOOL *of* ARTS & SCIENCES

MISSION & VALUES

The **mission** of the WFU Graduate School of Arts and Sciences is to train and mentor future leaders in research, teaching and innovation for serving humanity. This embodies the Graduate School's vital role as an engine of discovery that fuels the nation's ***scholarly and creative enterprise.***

Our **values** are steadfast and consist of ***critical thinking, service, diversity, discovery, mentoring,*** and ***ethics.*** These are integral to all our activities in the classroom, the laboratory or other research environments, and the broader communities of which we are a part.

Choosing the right graduate school is a critical step on the path to a fulfilling career. By choosing the Graduate School at Wake Forest, you will obtain the academic resources of a large university with the sense of community found in a smaller school.



WINSTON-SALEM, NORTH CAROLINA

The City of Arts and Innovation. Wake Forest University is located in the city of Winston-Salem, North Carolina, about 75 miles from the Blue Ridge Mountains and 225 miles from the beaches of the Atlantic Ocean. A city of about 241,000, Winston Salem has something to offer to everyone! Local art galleries and museums, delicious local restaurants, weekly farmers markets, vibrant downtown scene, golf courses, minor league baseball, 35+ wineries, breweries, and fascinating historical heritage!

Learn more at: <http://www.visitwinstonsalem.com>

CAMPUS

The Graduate School has two campus locations. The Reynolda Campus at Wake Forest University is on the main campus where the undergraduate college is located. The Biomedical Sciences programs are based at the Bowman Gray campus at Wake Forest Baptist Medical Center just west of downtown Winston Salem and in the downtown Piedmont Triad Research Park, Wake Forest Biotech Place. A handful of other programs; including Documentary Film, ITS, and MALS are located downtown at the Historic Brookstown Mill.

Learn more at: <http://www.visitwinstonsalem.com>

GRADUATE STUDENT INVOLVEMENT & ACTIVITIES

GRADUATE STUDENT ASSOCIATION

The Graduate Student Association at Wake Forest University is a highly motivated, active, and diverse group of students that strive to improve the graduate school experience by:

- *Providing a means by which graduate students can actively influence and participate in student related policies*
- *Protecting the rights of the graduate students while improving the quality of the environment for the students of Wake Forest University's Graduate School of Arts and Sciences*
- *Promoting fellowship among graduate students and faculty*

The GSA organizes events for Graduate Students including: Charitable Community work, Happy Hour Socials, Professional Development Seminars, Holiday Parties with student associations from other WFU professional schools (Law, Medical, PA, etc.), and Homecoming Tailgates, etc.

<http://www.gsa.graduate.wfu.edu/>

MASTER PROGRAMS



Bioethics
Biology
Biomedical Engineering*
Biomedical Informatics*
Biomedical Science*
Chemistry
Clinical & Population Translational Sciences*
Communication
Comparative Medicine*
Computer Science
Counseling (On-Campus & Online)
Counseling: Human Services (online)
Documentary Film
Education
English
Health & Exercise Science
Health Disparities in Neuroscience-related Disorders*
Interpreting & Translation Studies
Liberal Studies
Mathematics & Statistics
Molecular Medicine & Translational Science* Neuroscience Minor (BA-BS/MS)*
Physics
Psychology
Religious Studies
Sustainability

**Bowman Gray (Biomedical Sciences) Campus Program*

PHD TRACKS

TRACK 1 Physics

TRACK 2 Chemistry

TRACK 3 Biology

TRACK 4 Molecular and Cellular Bioscience*

Biochemistry and Molecular Biology

Cancer Biology

Microbiology & Immunology

Molecular Genetics & Genomics

Molecular Medicine and Translational Science

TRACK 5 Integrative Physiology and Pharmacology*

TRACK 6 Neuroscience*

TRACK 7 Biomedical Engineering*

**Bowman Gray (Biomedical Sciences) Campus Program*

CERTIFICATE PROGRAMS

- Bioethics
- Biomedical Research Ethics
- Clinical Bioethics
- Clinical and Population Translational Studies
- Interpreting and Translation Studies
- Audiovisual Translation and Interpreting
- Intercultural Services in Healthcare
- Interpreting Studies
- Translation Studies
- Teaching of Interpreting (Postgraduate)
- Interdisciplinary Graduate Certificate Program
Medieval and Early Modern Studies
- For English and Religious Studies MA Students
- Structural and Computational Biophysics
- Sustainability

**For more information, visit*

<http://graduate.wfu.edu/admissions/programs.html>

JOINT DEGREE PROGRAMS

MD/MA *Bioethics*

MD/MS *Clinical and Population Translational Sciences*

MD/PhD

MMS/PhD PA &MMTS

MDiv/MA *Bioethics*

MDiv/MA *Counseling*

MDiv/MAEd *Education*

MDiv/MA *Sustainability*

PhD/MBA

JD/MA *Bioethics*

JD/MA *Religion*

JD/MA *Sustainability*

BS/BA & MA *Bioethics*

(Available to WFU undergraduate students only)

BS/BA & MS *Neuroscience*

(Available to WFU undergraduate students only)

MA Bioethics

PROGRAM VISION “Where theory meets practice”

The goal of bioethics graduate education at Wake Forest is Informed Praxis – our students stand at the confluence of theory and practice, capable of synthesizing the two to help foster thoughtful decision-making and improved performance and outcomes in clinical care, biomedical research, and health policy and administration. Students can gain valuable practical experience in bioethics in a variety of ways. They can assist with educational and research projects undertaken by the Center for Bioethics, Health & Society. Students may also participate in practicum experiences, including observation in a variety of research and clinical settings.

The **Master of Arts in Bioethics** is the core of bioethics graduate study at Wake Forest. The MA requires 30 credit hours total (24 hours of course work, 6 hours of thesis work). Nine credit hours per semester constitute full-time status. The maximum per semester is 15 hours. Most bioethics courses are offered in the late afternoon or early evening to accommodate working professionals.

The Master of Arts in Bioethics Program welcomes both full-time and part-time students.

<http://bioethics.wfu.edu/>

MS | PhD (Track 3) Biology

Biology faculty and graduate curriculum are organized loosely into four research focal groups: **Cell and Molecular Biology; Ecology, Evolution, and Systematics; Neuroscience and Behavior and Integrative Plant Biology.** Additionally, some biology faculty members participate in the interdepartmental Structural and Computational Biophysics Certificate Program and play prominent roles in the Center for Molecular Communication and Signaling, the Center for Energy, Environment, and Sustainability, and the Center for Bioethics, Health, and Society.

The **MS PROGRAM** at Wake Forest includes two main components. In consultation with a three-member advisory committee, a 24 credit hour course curriculum is designed to build directly on a student’s undergraduate training. The student also designs and carries out a comprehensive thesis investigation in the laboratory of one of the Biology faculty.

The **PhD PROGRAM (TRACK 3)** is fundamentally research-oriented. Doctoral students take qualifying exams in their second year and mix graduate seminar courses and any appropriate general coursework with a primary emphasis on dissertation research.

The most important component of both degree programs is the research experience. Our students learn to perform *cutting edge biological research* by working closely with their advisors as they perform their thesis/dissertation research.

<http://college.wfu.edu/biology/graduate/>

MS Biomedical Engineering

ABOUT THE BIOMEDICAL ENGINEERING DEPARTMENT

The Department of Biomedical Engineering is a department within a medical school and part of a clinical division whose research and educational programs reside within the Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences (SBES). This unique position provides our faculty and students on the Wake Forest and Virginia Tech Campuses with a rich environment that encourages engineering research focused on relevant clinical and biomedical problems.

AREAS OF RESEARCH

Tissue Engineering | Biomedical Imaging | Nanomedicine & Nanobioengineering | Neuroengineering | Translational Cancer Research | Cardiovascular Engineering

Degree Requirements

Students pursuing a BME M.S. degree must complete a minimum of 30 total credits of graduate work made up of 21-24 course credits and 6-9 thesis research credits. All M.S. degrees require writing and defending a thesis. SBES does not offer a non-thesis degree. An M.S. can be earned “along-the-way” to the Ph.D. by students accepted into the direct-to-PhD degree path.

<http://www.wakehealth.edu/Biomedical-Engineering/>

MS Biomedical Informatics

The Master of Science in Biomedical Informatics (BMI) degree is a full-time, graduate degree option that is designed to train and mentor students to become well qualified scientists and researchers within the domain of informatics as applied to biomedical data. Students will learn in an interdisciplinary environment the quantitative and analytical methods necessary for understanding, evaluating, implementing, and using biomedical data and information. These methods can be applied to a variety of biomedical fields including imaging, genomics, clinical informatics, and public health informatics. Graduates from the program will be well positioned to work in the biotechnology, device, and pharmaceutical industries, private and government research labs, and academia.

A 4+1 option will allow undergraduate Wake Forest University students to complete an undergraduate degree and the MS in Biomedical Informatics within five years through the incorporation of research and coursework during the student’s senior year.

Four areas of specialization, implemented via formal concentrations, are expected:

- Bioinformatics
- Clinical informatics
- Imaging informatics
- Public health informatics

<http://graduate.wfu.edu/admissions/BMI.html>

MS Biomedical Science

The Master of Science in Biomedical Science degree is a full-time, graduate degree option that is designed to help students with a bachelor's degree, preferably with a major in the sciences, improve their academic foundation in the biomedical sciences, and augment their credentials for admission into health professional programs, Ph.D. study in the sciences, or entrance to the workforce.

The faculty of the program are graduate faculty from Track 4 (Molecular and Cellular Biosciences PhD program), Track 5 (Integrative Physiology and Pharmacology PhD program), and Track 6 (Neuroscience PhD program).

Areas of Concentration

- Neuroscience
- Areas of Specialization
- Integrative Physiology and Pharmacology
- Molecular and Cellular Biosciences
- Pre-medical post-baccalaureate

The Pre-medical post-baccalaureate component of our master's program will aid students who have already completed medical school prerequisites and earned a baccalaureate degree to enhance their current science knowledge with graduate level medical science classes and MCAT preparation to increase their competitiveness for health professional school admissions or other medical science career.

<http://graduate.wfu.edu/admissions/BMSC.html>

MS | PhD (Track 2) Chemistry

The Department of Chemistry offers graduate programs of study leading to the **M.S. and Ph.D. degrees** in the fields of ***analytical, biological, inorganic, organic, and physical chemistry***. The emphasis of the program is on close interaction between faculty and students. This ensures that the students develop to their full potential as quickly as possible. Choice of a research adviser is usually completed by the end of the first semester, and students begin their research during the second semester.

M.S. DEGREE

The requirements for the M.S. program are normally completed in two years. For the M.S. degree, a student:

- completes 24 hours of course work
- submits a thesis based on his or her completed research
- passes an oral examination based on the thesis

PH.D. DEGREE (TRACK 2)

The essence of the Ph.D. degree is the solution of an important chemical problem at the frontier of current knowledge. This is accomplished under the direction of a faculty adviser who is chosen by the student. The student's dissertation, based upon this research, is defended in an oral examination before a Ph.D. committee. The course requirement for the Ph.D. is determined by an advisory committee and is tailored to meet the needs of the individual student while providing a broad, well-balanced background. Competence in the student's selected area of study is tested by means of cumulative examinations. The requirements for the Ph.D. degree are normally completed in four to five years.

<http://college.wfu.edu/chemistry/graduate>

MS Clinical & Population Translational Sciences

The Master of Science (MS) Degree in Clinical and Population Translational Science (CPTS) is designed for health professionals and researchers who seek training in the clinical and population aspects of translational research. Coursework emphasizes biostatistics, epidemiology, and applied clinical and population research methods, along with the responsible conduct of research and scientific communication. Courses are primarily taught by faculty within the Division of Public Health Sciences and are held on Tuesdays and Thursdays.

The CPTS MS degree prepares students to:

- Develop meaningful and feasible research questions.
- Design and implement studies to answer clinical and population research questions.
- Perform and interpret statistical analyses and collaborate effectively with biostatisticians.
- Conduct research in a responsible and ethical manner.
- Communicate through grant applications, protocols, manuscripts, abstracts, and presentations.
- Collaborate productively in multidisciplinary scientific teams. Students generally complete all required course work in one calendar

<https://www.phs.wakehealth.edu/public/edu.cfm>

MA Communication

The Master's Degree in Communication at Wake Forest University provides a comprehensive study of the field in ***qualitative, quantitative, rhetorical, and critical methods***.

The 4-semester program requires two research methods courses, one in rhetorical theory and criticism, the other in quantitative methods in communication studies. Students select their additional courses from a range of graduate-only seminars or bridge seminars, where they learn in small classes with upper-level undergraduates.

The graduate seminars include the second part of the research method courses in both rhetoric ***and quantitative design; persuasion; alternative qualitative and quantitative methods; health communication; democratic theory; rhetoric of science; argumentation; public address; social movements; international communication***; and many more special topics seminars.

The rigorous nature of our program provides a solid foundation for doctoral degrees and many of our students continue their graduate work at nationally ranked PhD programs in Communication.

We also provide important communication skills for our students to ***pursue professional careers in public advocacy, Debate program, advertising, marketing, television and other media, law, education, health policy***, and many more.

<http://college.wfu.edu/communication/graduate-program>

MS Comparative Medicine

The Master Program in Comparative Medicine at Wake Forest School of Medicine (WFSM) is intended to provide graduate research training specifically for individuals holding the DVM degree. Financial support in this program is only available for those with a DVM.

The Master of Science in Comparative Medicine is administered through the Section on Comparative Medicine, which is a division of the Department of Pathology at WFSM. The primary mission of the Section on Comparative Medicine is to provide an academic base for faculty who care for and/or who use animal models of human disease in programs of research designed to better understand problems of human health.

Integral to its mission is the Department's commitment to pre- and postdoctoral education and training in the areas of comparative medicine and molecular and cellular pathobiology. This mission is facilitated by the unique nature of our animal facilities and training faculty's expertise in working with animal models.

Major interests include: cardiovascular disease and lipid metabolism, cancer biology and risk assessment, diabetes and obesity, behavioral biology such as depression and anxiety, women's health/reproductive medicine, nutrition, comparative pathology, and substance abuse.

Program Goals

This program is available as an alternative for individuals who hold a DVM degree and are interested in pursuing a career in research or laboratory animal medicine.

<http://www.wakehealth.edu/compmed/graduate/>

MS Computer Science

The department offers a program of study leading to the Master of Science degree in computer science. The program is designed to accommodate students seeking a terminal MS degree or preparation for entering a PhD program.

Current areas of research focus are:

- computer and network security
- digital media
- mobile computing
- Imaging
- computational biology.

Students in the program may apply to participate in the Interdisciplinary Graduate Track in Structural and Computational Biophysics. On successful completion of this track, a student will earn an MS degree in computer science (thesis option) with a Certificate in Structural and Computational Biophysics.

FACULTY RESEARCH INTERESTS

- Artificial Intelligence
- Computational Biology and Bioinformatics
- Databases
- Scientific Computing and Imaging Systems
- Multimedia and Digital Design
- Networks, Security and Operating Systems

<http://college.wfu.edu/cs/graduate-program/program-description>

MA | MAHS Counseling

THE CLINICAL MENTAL HEALTH COUNSELING

Gain professional knowledge, skills, and practices necessary to address a wide variety of circumstances within the clinical mental health counseling context. Clinical mental health counselors can find opportunities in a number of settings, including community agencies, behavioral health care facilities, hospitals, employee assistance programs, and substance abuse treatment centers.

THE SCHOOL COUNSELING PROGRAM provides prospective school counselors with the knowledge, skills, and competence necessary to establish and conduct effective developmental guidance and counseling programs in schools, kindergarten through the twelfth grade.

- *Learn to effectively guide, support, and communicate with school-aged children and at risk youth.*
- *Focus on clinical mental health, substance abuse and addictions, and family/marriage counseling.*

ONLINE PROGRAM OPTIONS

Clinical Mental Health: On-Campus and Online Programs

School Counseling: On-Campus and Online Programs

Human Services: Online only

This program builds on the foundational courses of the Department's counseling programs to prepare human services professionals that are skilled in problem-solving and service delivery. Students will learn administrative strategies as well as program planning and delivery skills.

<http://college.wfu.edu/counseling/programs/graduate-program-of-study/>

MA | MFA Documentary Film

MASTER OF FINE ARTS

The comprehensive curriculum consists of courses in **writing, production, and research, as well as documentary history and ethics**. The coursework is designed not only to equip students with the skill set needed to produce professional quality films, but also to develop a respect for the traditions of the craft, an understanding of the economic aspects of the industry, and the intellectual discipline required to translate a creative vision into film. Program features a skills intensive curriculum and emphasis on the social awareness elements that lie at the heart of the documentary tradition. Our faculty believe it is imperative to impart to students the power and responsibility documentary filmmakers have in a world increasingly dependent on the moving image as a way to educate, inform, and effect change.

MASTER OF ARTS

The two-year Master of Arts offers you the opportunity to tap into the expertise and prepare for careers producing sports media examining the complex relationship between sports and society. More specifically, the program will provide you with the skills to produce long form documentary, short films, and website projects through:

- *Storytelling skills courses in writing, editing, directing, and cinematography taught by seasoned award-winning filmmakers.*
- *Challenging coursework, taught by distinguished Wake Faculty members, that explores the social and cultural role of sports in society.*
- *Conversations with influential speakers on issues of class, culture and race.*
- *Educational and professional experiences with local and regional sports teams and organizations.*
- *Internships at local, regional and national sports media and sports communication companies*

<http://college.wfu.edu/documentary/>

MAEd Education

Three master's degree programs are available in graduate teacher education:

MASTER TEACHER FELLOWS (MTF) This thirteen-month program involves coursework and fieldwork, including one semester of full-time student teaching. It is now offered for either Secondary (grades 9-12) or for Elementary (grades K-6). For secondary, students must have a Bachelor's degree (or equivalent coursework) in one of our content areas: English, Foreign Languages (French or Spanish, K-12), Mathematics, Science (Biology, Chemistry, or Physics), and Social Studies.

ADVANCED LICENSURE – MASTER TEACHER ASSOCIATES (MTA) This program provides an extension of the candidate's current teaching license. It is also thirteen months and it includes coursework and other requirements to foster extension of the candidate's development in content, pedagogy, and leadership. It is offered for either Elementary or Secondary levels.

MASTER OF EDUCATIONAL STUDIES (MES) This program is for students who are interested in education, but choose not to seek a teaching license.

CURRICULUM, INSTRUCTION, AND ASSESSMENT CERTIFICATE is appropriate for those with elementary, secondary, or higher education interest.

<http://college.wfu.edu/education/graduate-program/overview-of-graduate-programs/>

MA English

The Department of English at Wake Forest offers a Masters Program in preparation for doctoral study, for teaching at the advanced secondary level, and for developing advanced writing skills.

Our offerings cover a broad selection of courses in English and American literature, in fields ranging from early medieval culture to literary theory, international approaches to Romanticism, science and literature, film and literature, and African-American, Ethnic American, and Postcolonial literatures.

The department hosts a regular series of graduate colloquia as well as lectures by distinguished scholars from other universities, as well as readings by nationally and internationally recognized novelists and poets, sponsored by the department and by the Wake Forest University Press, the major publisher of contemporary Irish poetry in the United States.

Our graduates who desire to continue beyond the MA have consistently gained acceptance to major doctoral programs. Graduates have also pursued careers in publishing, teaching, academic administration, public service and at foundations such as the Carnegie Foundation.

Generous financial aid packages make a graduate degree in English at Wake Forest more affordable for our top applicants than Masters programs at most public universities.

<http://college.wfu.edu/english/ma-english/>

MS Health & Exercise Science

This program is a research agenda focused on understanding the determinants and prevention of chronic disease and disability across the lifespan. The curriculum is designed to prepare individuals for careers as exercise specialists directing preventive and rehabilitative programs, positions in health and exercise science research programs and further study in graduate programs or allied health programs.

We offer students:

- a) rigorous coursework from faculty who are teacher-scholars
 - b) an internship in the chronic disease management program run by the department where students apply the principles learned in the classroom, and
 - c) a MS thesis requirement where students work one-on-one with a faculty advisor.
- Members of the HES faculty are engaged in collaborative research with the Departments of Cardiology, Pulmonology, Public Health Sciences, Pediatrics, Geriatrics, and Neurology at the Wake Forest University School of Medicine and the Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences.

INTERNSHIP IN HEALTHY EXERCISE AND LIFESTYLE PROGRAMS

First year students serve an internship with the Wake Forest University Healthy Exercise & Lifestyle Programs (HELPS) and participate in the Exercise Specialist workshop which is conducted on campus through the American College of Sports Medicine. For graduate students in the Health and Exercise Science program, the \$600 workshop and certification fees are covered by a scholarship awarded by HELPS.

http://hes.wfu.edu/grad_overview.htm

MS Health Disparities in Neuroscience-related Disorders

Disparities in presentation, care, severity, and disability for neurological disorders such as stroke, Alzheimer's disease, epilepsy and Parkinson's have been identified in U.S. minority populations. Addressing health disparities becomes critical when considering the cost and burden on society of unequal care and treatment of what will be more than 50% of our society by 2060.

In the past, basic, clinical, and community-based researchers operated in separate domains, often creating barriers to the translation of scientific findings into widespread improvements in human health. The WFSM Division of Public Health Sciences developed a Master of Science degree in Clinical and Population Translational Science (CPTS) to begin to address this translational gap. At the same time, the Neuroscience Program committed to providing training in translational research with the development of the clinical neuroscience course that engaged basic scientists and clinicians to address neurological disorders and the basic research to understand underlying mechanisms to begin to identify potential therapeutic interventions to improve outcome. Couple these initiatives with the Maya Angelou Center for Health Equity and the result is our program to address health disparities in neurological disorders.

The program will include coursework, a thesis research project, mentoring, and career development. The product of this program will be a solid foundation in Neuroscience, Epidemiology and Biostatistics training and hands-on, practical research projects.

<http://neurohealthdisparity.ms.graduate.wfu.edu/>

MA Interpreting & Translation Studies

MA IN INTERPRETING AND TRANSLATION STUDIES

This is a professionally oriented and research-based track that prepares interpreters and translators to work in the growing language industry in a variety of fields – *foreign affairs, media, business, law and healthcare delivery*. Along with legal language specialists and ASL interpreters, medical interpreters are currently in the highest demand among the public service linguists in the US. This track provides solid preparation for those who intend to pursue a doctorate in this new field. *Language Tracks: Spanish-English, Chinese-English*

MA IN TEACHING OF INTERPRETING

This track offers a comprehensive curriculum for teaching of interpreting to faculty of colleges nationwide. It is the only academic program in the Northern hemisphere to focus on methodology of teaching interpreting. The curriculum lays the foundation for understanding the interpreting encounter, the co-conversational process, and sociocultural determinations, among other important goals, and it includes a broad interdisciplinary research component, which is absent from the training seminars/workshops of other, non-academic programs. *This track requires strong foreign language competency and proven interpreting experience. It is, however, non-language specific. Courses are held in English and it is open to candidates with any language combination.*

MA IN INTERCULTURAL SERVICES IN HEALTHCARE

This track is the first such specialization in the U.S., preparing graduates to enter managerial positions in culture-sensitive healthcare delivery areas such as bilingual employment, patient relations, translation/interpreting services and health communications. *This track is non-language specific and is taught in English. Foreign language competency is desirable but not required.*

<http://interpretingandtranslation.wfu.edu/>

MA | MALS Liberal Studies

THE MA IN LIBERAL STUDIES DEGREE is built around one of two integrated themes. *Students choose courses focused in American Cultural Studies or Global Studies, drawing on the expertise of four core University departments: English, History, Political Studies and Communication.* Students are expected to have taken the GRE, and will complete a thesis project at the end of their coursework. This degree is designed primarily for the student who wishes to enroll full-time, and may have aspirations for further study in an interdisciplinary doctoral program.

THE MALS DEGREE, has been the cornerstone of our program since 1987, is designed for students from the surrounding community who are compelled by their intellectual curiosity to pursue a *broad, interdisciplinary course of studies on a part-time basis*. This degree satisfies those who are attracted to learning for learning's sake, who do not need the advanced degree for career promotion, and who come from diverse backgrounds. This is a course-intensive program with no final thesis requirement.

Students in either program can supplement their Liberal Studies courses with others provided across the full range of the liberal arts: courses in *religion, sociology, economics, humanities, psychology, and the performing arts.*

<http://mals.wfu.edu/>

MA Mathematics & Statistics

ABOUT THE PROGRAM

The program is designed to accommodate students seeking either a terminal degree or preparation for Ph.D. work at another institution. The degree requirements are flexible and permit both thesis and non-thesis programs of study, with a focus on either mathematics (pure or applied) or on statistics. Faculty research interests include *algebra, topology, number theory, combinatorics, differential equations, analysis, medical and biological applications, and scientific computing; statistical climatology, environmental and ecological statistics, Bayesian modeling and computing, stochastic processes and network analysis, applications of statistics to social sciences and biology.*

OTHER FACTS

- Almost all of the participants in our program receive substantial aid: a teaching assistantship, or a full or partial scholarship.
- The department sponsors a chapter of Pi Mu Epsilon (a mathematical honor society) as well as a Mathematics Club. The Math Club sponsors both academic and social activities including colloquia, intramural sports teams and picnics.
- Graduates of our Masters program have gone on to Ph.D. programs in Mathematics, Statistics, Biostatistics, Education, Operations Research, and Computer Science
- Graduate students have also taken jobs in actuarial science, statistics, biostatistics, analytics, computing, government security, government contracting, and teaching a college and high school level.

<http://college.wfu.edu/math/prospective-graduate-students/program-description>

MS | PhD (Track 1) Physics

THE PHYSICS PROGRAM offers a comprehensive course of study in classical and modern physics, with intensive training in one of the frontier areas of modern research, including *biophysics, nano-technology and materials physics, condensed matter physics, gravitation and particle physics and optical and laser physics.*

- State-of-the-art research facilities
- Strong interdisciplinary research efforts with other departments, including Computer Science, Chemistry, Biology, and the Wake Forest University Medical School and Comprehensive Cancer Center
- Students are issued a laptop computer upon matriculation

SPECIAL AND INTERDISCIPLINARY PROGRAMS

Structural and Computational Biophysics Track
Molecular Signaling
Medical Physics

<http://physics.wfu.edu/grad.html>

MA Psychology

“STRONG EMPHASIS ON RESEARCH”

The general MA psychology program at Wake Forest is appropriate for students who wish to pursue their education at the Ph.D. level but may not be sure of the area of specialization, who want to strengthen their application for high-quality PhD programs, who wants more individual attention than is typically possible in large PhD programs, and/or want more background in psychology.

ADMISSIONS INFORMATION

The Psychology Department usually begins the review of applications around February 1st and we enroll 10 to 16 students each academic year. Admission is based on many factors, including but not limited to undergraduate GPA, GRE scores, research experience, letters of recommendation, and evidence of motivation. Although we do not have a strict “cut-off” for GRE scores or GPA, our past 3 year average GRE score is 315 (combined verbal and quantitative), and the average GPA is 3.76. We do accept students without a psychology major, particularly when they have the basic psychology training that is necessary for our program, such as Introductory Psychology, Research Methods, and Statistics.

<http://college.wfu.edu/psychology/graduate-program/>

MA Religious Studies

The Master of Arts in Religious Studies offered by Wake Forest University’s Department for the Study of Religions provides students an opportunity to forge a unique, creative, and rigorous program of study. The degree can serve either as a terminal degree or as preparation for a doctoral program. It emphasizes the *comparative and theoretical study of religion* in its various traditions and forms. The program fosters interdisciplinary approaches, offering training in traditional and contemporary theories and methods in conjunction with substantive investigations of diverse religious traditions and topics. Students are encouraged to make imaginative use of all available resources in the creation of their own distinctive programs of study. Typically, this would involve 1) a focus on a particular religious culture/region or historical period, and 2) an approach or approaches to the study of the subject area.

RELIGIOUS CULTURES/ REGIONS/ HISTORICAL PERIODS

- Judaism, Christianity, Islam.
- Hinduism, Buddhism, South Asian Religions; East Asian Religions (China & Japan).
- Near Eastern Languages and Literature, Hebrew Bible; Ancient Near East, Greco-Roman World.
- Early, Medieval, & Modern Christianity.
- Christian Mysticism, African Christianity, American Religious Traditions, Evangelical Christianity.
- Contemporary Native American Culture & Religions
- African Religions

<http://college.wfu.edu/religion/graduate-program/overview-of-the-program/>

MA Sustainability

THE MASTER OF ARTS IN SUSTAINABILITY is a distinctive, interdisciplinary one-year program that combines the social sciences, humanities, natural sciences, management and law. Courses taught will include guest lecturers and off-site facility visits. As a result, students will have unparalleled opportunities to engage with professionals beyond the Wake Forest campus.

SUSTAINABILITY PROGRAM CORE COURSES

- Global Human Systems
- Natural Science for Sustainability
- Sustainable Organizational Management
- Sustainability Law and Policy

FINANCIAL ASSISTANCE

We offer institutional financial support. Institutional financial support is awarded on a rolling basis, so early application is highly encouraged.

<http://graduate.cees.wfu.edu/>

PhD Track 4 | Molecular & Cellular Biosciences

The MCB Track offers doctorate programs in:

BIOCHEMISTRY AND MOLECULAR BIOLOGY Training in structural biology, molecular biology, genetics/genomics and proteomics/metabolomics. Research interests include signal transduction in cancer, inflammation, cardiovascular disease, DNA repair and defense against cellular damage, redox biology, and metabolic diseases.

CANCER BIOLOGY Research projects range from basic science to clinical trials; areas include DNA damage and cellular defense, cell growth and survival, tumor microenvironment, regenerative medicine, cancer stem cells, human genomics, oncolytic viruses in cancer therapy, drug design, tumor metabolism, tumor angiogenesis, metastasis, and molecular cancer epidemiology and cancer control.

MICROBIOLOGY AND IMMUNOLOGY Research interests include development of viral vaccine vectors and adjuvants, host-pathogen interactions, T and B lymphocyte activation, respiratory immunity, neutrophil biology and biochemistry, the molecular basis for bacterial and viral diseases, and viruses used for cancer therapy.

MOLECULAR GENETICS AND GENOMICS Areas of active investigation include: control of gene expression; molecular pathogenesis; protein biosyntheses and compartmentalization; cell development and differentiation; carcinogenesis; development of cellular resistance to cancer; genetic basis of disease; clinical cytogenetics; molecular mechanisms of mutagenesis; and signal transduction.

MOLECULAR MEDICINE AND TRANSLATIONAL SCIENCE Offers translational research with significant clinical exposure that links knowledge from the laboratory to the bedside to further medical science. Students receive dual mentoring by PhD and MD scientists in the fields of lipid sciences (pathology), regenerative medicine, biochemistry, genetics, cancer biology, microbiology & immunology, internal medicine, physiology and neuroscience.

http://graduate.wfu.edu/admissions/documents/MCB_flyer.pdf

PhD Track 5 | Integrative Physiology & Pharmacology

The Integrative Physiology & Pharmacology (IPP) Program at Wake Forest University comprises more than 80 participating faculty members across 18 departments and programs who share a common perspective of pharmacology as an integrative discipline within the organism. The Program currently consists of 23 current graduate students and several postdoctoral fellows who are learning to *integrate molecular, cellular, tissue, organ and clinical information to investigate the response to experimental therapeutics in model disease systems and patients*. This will result in new avenues to advance experimental and clinical approaches to treat human disease. *The track offers a broad range of training opportunities in state-of-the-art research in several fields including cardiovascular, neuro-, GI, pulmonary, reproductive, immuno- and smooth muscle physiology and pharmacology.*

A Ph.D. in Integrative Physiology and Pharmacology is advantageous for employment environments in which familiarity with multiple organ systems is important: the pharmaceutical industry; academic teaching institutions, including undergraduate education as well as professional schools (medical, dental and veterinary, pharmacy, and allied health professions (nursing, physical and occupational therapy, physician's assistant programs)); and government regulatory agencies (e.g., EPA, FDA, CDC).

<http://ipp.graduate.wfu.edu/>

PhD Track 6 | Neuroscience

The Neuroscience program is based on the idea that neuroscience, broadly conceived, provides a fundamental framework for understanding the biological basis of behavior and the causes of neurological and psychiatric disorders. Accordingly, our major goal is to train students to be able to carry out meaningful and significant research in all areas of modern neuroscience, and to give them an appreciation of the importance of characterizing functional organization at all levels, from molecular and cellular structures, to local neural circuits and brain areas, to whole organisms and their behavior. This integrated approach to basic neuroscience research is key for understanding neurobehavioral pathologies and translating this information to the clinic.

The research of our graduate students *spans virtually the whole realm of modern neuroscience, including molecular, developmental and behavioral neurobiology, as well as cognitive and computational neuroscience.*

Accordingly, there are numerous possible areas of specialization within our training curriculum. For example, opportunities are available for specialized course work and research training in sensory systems, development, neuropharmacology and addiction, aging, neuroimaging, behavior, neurodegeneration, or the autonomic nervous system. The goal is to allow students to pursue their specific research interests while receiving rigorous training for a successful career in the neurosciences.

<http://neuroscience.graduate.wfu.edu/graduate-program/>

PhD Track 7 | Biomedical Engineering

The Biomedical Engineering Department is a participant in the Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences (SBES). PhD and MS degree programs in Biomedical Engineering are offered exclusively via the SBES and degrees are awarded jointly by Virginia Tech and Wake Forest University.

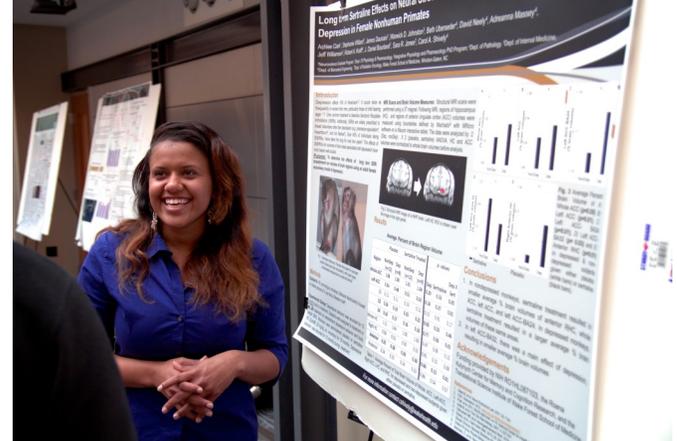
RESEARCH THEME AREAS AT BOTH CAMPUSES

- Biomedical imaging
- Biomechanics
- Cell, tissue, and material engineering
- Medical physics
- Bioinformatics
- Surgical simulation

With campuses in Blacksburg (Virginia Tech) and Winston-Salem (Wake Forest), this unique partnership brings the resources of the WFU School of Medicine together with the Virginia Tech Colleges of Engineering and Veterinary Medicine and provides exceptional opportunities for research and education. Regular interaction with physicians, clinical scientists, and basic biomedical and physical scientists provides a rich environment for collaboration and for focusing engineering research on relevant clinical and biomedical problems.

Students pursuing a BME Ph.D. degree must earn a minimum of 90 credit hours beyond the B. S. degree as shown in the table below. An M.S. degree is not required for admission to the program.

<http://graduate.wfu.edu/admissions/track7.html>



APPLICATION CHECKLIST

- Selection of Academic Program (s)
- Prepare required materials
- Personal Statement
- Transcript (s) (*unofficial transcripts may be used for the review process*)
- Request letters of recommendation (3 required)
- Test reports (*unofficial reports may be used for the review process*)
- Prepare additional program requirements (*if required by your program*)
- Complete application
- Pay \$75 application fee or request application fee waiver
<http://graduate.wfu.edu/admissions/checklist/app-submission.html>

**Application Deadlines vary between programs and campuses. Please check our website for full list of dates.*

**For more information on Personal Statements, Transcripts, etc., please visit:*

<http://graduate.wfu.edu/admissions/onlineapp.html>

COSTS *and* FUNDING

REYNOLDA CAMPUS MASTERS STUDENTS

There are a limited number of tuition scholarships, fellowships and assistantships available to qualified students. Applicants are considered for merit based university aid and are not required to complete additional paperwork. Applicants to the Interpreting and Translation Studies Program should follow the instructions listed on the ITS website for information on how to apply for financial aid. Early submission of applications is encouraged.

DOCTORAL STUDENTS

All doctoral students are considered for financial aid in the form of a tuition scholarship and stipend for living expenses.

HEARST SCHOLARSHIP

Hearst Scholarships are to be awarded to create and sustain underrepresented populations within the student body of the Graduate School of Arts and Sciences. All eligible applicants to graduate programs on the Reynolda campus will be considered.

<http://graduate.wfu.edu/admissions/costofstudy-RC.html>

BOWMAN GRAY MASTERS STUDENTS

Applicants are considered for merit based university aid and are not required to complete additional paperwork. Early submission of applications is encouraged.

DOCTORAL STUDENTS

All doctoral students are considered for full financial aid in the form of a tuition scholarship and stipend for living expenses.

PROGRAM- BASED SCHOLARSHIPS & AWARDS

Various Scholarships are available on a competitive basis with nominations solicited by either the academic program or the Graduate School.

<http://graduate.wfu.edu/admissions/costofstudy-BG.html>

CONTACT US

REYNOLDA CAMPUS

gradschl@wfu.edu
1-800-257-3166
336-758-6153

BOWMAN GRAY CAMPUS

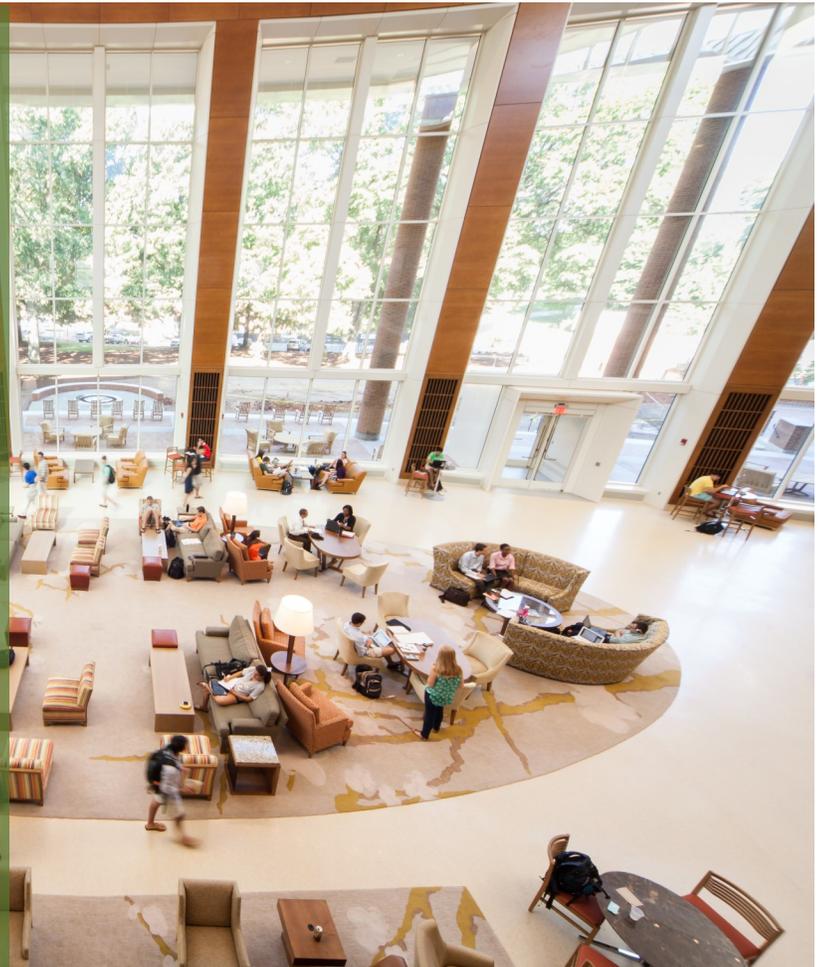
bggrad@wakehealth.edu
1-800-438-4723
336-716-4224

GRADUATE PROGRAM CONTACTS

A full list of Graduate Program contacts can be found online at:
<http://graduate.wfu.edu/admissions/documents/ProgramContactList.pdf>

VISIT US ONLINE!

graduate.wfu.edu





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