Join Our Community of Scholarship and Research
Join the Department of Biology at Villanova for research training and advanced coursework in a broad range of the biological sciences. The graduate programs in Biology will prepare you for a life of continuing inquiry and are built on the principle that science is a continuing human endeavor that encompasses research, learning and teaching.

Why Should You Choose Villanova?
- Significant opportunities for laboratory and/or field research
- Study on a full- or part-time basis
- Prepare for a career in industry or academe
- Learn in small classes with our distinguished faculty
- Join our many graduates who have completed a master’s degree and advanced to a quality doctoral program
- Enjoy competitive graduate tuition rates
- Apply for a graduate assistantship (February 1 application deadline)

Choose Your Course of Graduate Study
You will find detailed requirements for our graduate programs on the web at www.gradbio.villanova.edu. We encourage you to contact the graduate director at gradbio@villanova.edu if you have any questions about the programs or to determine the program that is right for you.

Master of Science in Biology
- Degree requires 30 credits including a minimum of 20 in coursework and the remainder in thesis research
- Research available in all areas of biology
- Program culminates with an original written thesis that you will prepare under the direction of a faculty mentor and two additional committee members
- General GRE required, subject GREs recommended

Master of Arts in Biology
- Degree requires 33 credits, with no thesis requirement
- You may choose a concentration in Cell, Molecular and Developmental Biology (CMDB) or Ecology, Evolution and Organismal Biology (EEOB)
- Research available in all areas of biology
- Program culminates in a comprehensive written and oral examination
- General GRE required, subject GREs recommended

Certificate and Advanced Certificate of Graduate Study
If you do not wish to pursue the full master’s degree, but want to develop a particular skill set or explore further options for study, you may choose one of our graduate certificate programs. You may also choose to apply to the master’s degree program after completing a certificate. You may complete the certificate programs on a full or part-time basis and coursework generally focuses on one of two areas, CMDB or EEOB. The Certificate of Graduate Study requires 16 credit hours including at least three lab courses. The Certificate of Advanced Graduate Study requires 24 credit hours including at least four lab courses.
Explore Our Curriculum

Recent course offerings include:
Immunology, Endocrinology,
Pharmacology, Experimental
Cell/Molecular Methods,
Biodiversity and Systematics,
Plant Ecophysiology,
Molecular Evolutionary Genetics,
Advanced Bacteriology,
Neurophysiology,
Directed Research and Thesis Research.
You will find a complete list of courses at gradbio.villanova.edu.

STUDY WITH OUR DISTINGUISHED FACULTY

Ronald A. Balsamo, PhD
University of California, Riverside, ‘93
Relationship of leaf architecture and biomechanics to drought tolerance; whole plant response to environmental stress

Anil Bamezai, PhD
All India Institute, ‘87
Regulation of CD4+ T lymphocyte development in the thymus and responses to protein antigens in the peripheral lymphoid tissues

Aaron M. Bauer, PhD
University of California, Berkeley, ‘86
Phylogenetic systematics and biogeography of squamate reptiles; evolutionary morphology of tetrapod vertebrates

Samantha Chapman, PhD
Northern Arizona University, ‘05
Ecosystem processes and influencing biotic factors; impacts of plant biodiversity on carbon and nutrient cycling and microbial diversity

Robert L. Curry, PhD
University of Michigan, ‘87
Vertebrate behavioral, population, & molecular ecology; ornithology; conservation biology

Angela J. DiBenedetto, PhD
Cornell University, ‘89
Molecular and cellular biology; genetics; developmental neurobiology, especially programmed cell death

Russell M. Gardner, PhD
Indiana University Medical Center, ‘75
Endocrinology; pharmacology; mechanisms of hormone action, development of hormone responses; hormonal control of uterine growth and differentiation

Vikram K. Iyengar, PhD
Cornell University, ‘01
Behavioral ecology, entomology; chemical ecology, sexual selection and its consequences, evolution of arthropod mating systems

Todd Jackman, PhD
University of California, Berkeley, ‘93
Evolutionary genetics of salamanders and lizards using DNA sequence data

Janice E. Knepper, PhD
Brown University, ‘79
Molecular biology; virology; molecular mechanisms of viral oncogenesis

Adam Langley, PhD
Northern Arizona University, ‘05
Global change ecology, terrestrial carbon and nutrient cycling, marsh sustainability, and mycorrhizal ecology

John Olson, PhD
University of Michigan, ‘90
Metabolic & muscle physiology; ecophysiology; thermogenesis in birds and mammals; mechanical muscle performance of vertebrates and invertebrates

Joseph A. Orkwiszewski, PhD
Bryn Mawr College, ‘71
Regulation of plant development; control mechanisms of plant growth and development

Michael Russell, PhD
University of California, Berkeley, ‘90
Basic and applied marine ecology, population biology, and fisheries science

Louise A. Russo, PhD
Penn State Hershey Medical Center, ‘87
Cell biology & physiology; establishment of the uterine receptive state and fertility; regulated expression of specific cell surface adhesion receptor proteins and degradative enzymes

Melanie A. Vile, PhD
University of Notre Dame, ’01
Biogeochemical interactions between microbes and their chemical environment, and how these exchanges affect ecosystem functioning

R. Kelman Wieder, PhD
University of West Virginia, ’82
Ecosystem ecology & biogeochemistry, wetland ecology; carbon cycling & accumulation/release in boreal peatland ecosystems

James W. Wilson, PhD
Columbia University, ’98
Bacterial pathogens, novel bacterial genes, Rotating wall vessel (RWV) culture. Cloned type III secretion systems

Dennis D. Wykoff, PhD
Stanford University, ‘99
Molecular genetics of yeast, bioinformatics

Elaine M. Youngman, PhD
Johns Hopkins School of Medicine, ’07
Exploring connections between small RNA biology, genome surveillance and fertility using molecular biology, genetics and genomics approaches

Matthew J. Youngman, PhD
Johns Hopkins School of Medicine, ’07
Molecular genetics and cell biology of aging; innate immunity and stress resistance

For more information:
610.519.7424 • gradbio@villanova.edu
gradbio.villanova.edu

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