We are pleased that you have shown interest in the Master's Program in the Biological Sciences at Old Dominion University. You can find information about the application process through the <u>Office of Admissions</u>.

Specific information about the Master's in Biology can be found in the next pages of this document. We expect all applicants to contact <u>our Faculty</u> and ask them about laboratory openings for new students. Citizens of countries other than the U.S.A. should <u>a</u>) get a written confirmation from one of our Graduate Faculty showing you have an advisor in the Biology Department, and then <u>b</u>) submit your admissions application.

If you have submitted an application to ODU, then you can check the status of your file at <u>LEO Online</u> Admissions Menu >Application Status Check.

In 2014, the Biology Master's Program graduated nine students and admitted 10 (29%). All matriculated students averaged 303 on the GRE (v+q) with an undergraduate grade point average of 3.28. Over the past six years, our median graduation rate was 3.0 years. There are 39 students in our program, 3% from international backgrounds.

Don't hesitate to contact me with your questions.

Sincerely,

Robert E. Ratzlaff, Ph.D. Director, Biology Master's Program Department of Biological Sciences Old Dominion University (757) 683-4361 rratzlaf@odu.edu

Biology Graduate Programs:

Master of Science in Biology <u>http://sci.odu.edu/biology/academics/degree_programs.shtml</u>. Biomedical Sciences PhD <u>http://sci.odu.edu/biology/academics/phdmed.shtml</u> Ecological Sciences PhD <u>http://sci.odu.edu/biology/academics/ecologyphd.shtml</u>

January 7, 2015

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GENERAL INFORMATION

Old Dominion University is located in <u>Norfolk, Virginia</u>, one of the nation's oldest cities, having recently celebrated its three hundredth anniversary. Norfolk is one of seven major cities which make up the Hampton Roads region with a population 1.7 million. Hampton Roads boasts one of the world's largest natural harbors, and is home to a thriving commercial seaport and the U.S. Atlantic Naval Fleet. The maritime influence is also evident in the region's mild climate. The region is renowned for its historical and recreational attractions.

<u>Old Dominion University</u> is Virginia's forward-focused, public doctoral research university for high-performing students from around the world who want a rigorous academic experience in a fast-paced and profoundly multicultural community. With an enrollment of more than 23,000 students, the university offers 70 bachelor's, 60 master's and 36 doctoral degree programs and 2 educational specialists degrees. ODU's eminent scholarship and innovative and engaging teaching foster nationally recognized programs. A determined entrepreneurial approach to problem-solving drives cutting-edge research and strategic partnerships with government, business, industry, organizations, and the arts. In addition to its 185-acre main campus in Norfolk, Old Dominion operates higher education centers in Hampton, Virginia Beach, and Portsmouth and a thriving distance learning network.

<u>Biology@ODU</u> or <u>Facebook</u> are sites that highlight the work and interests of the faculty, students and staff of the Biology of Biologicial Sciences.

Master of Science Programs in Biology	Campus Facts	ODU Campus Map
ODU Tuition Calculator	ODU Office of Housing and Residence Life	

SUMMARY OF THE APPLICATION PROCESS

Admission requirements for regular admission to the Master's Program in Biology. Applicants who lack a degree in Biology or do not meet all of our admission standards, but are otherwise qualified, may be admitted on a provisional status.

Application deadlines

Applications are submitted or apply online to the <u>Office of Admissions</u> (applicants from USA schools) or the Office of International Admissions at Old Dominion University (applicants from foreign schools).

- February 1st for summer and fall semester admission. Students who want to be considered for financial aid from the Department of Biological Sciences should apply by February 1st to be considered for financial aid for the following academic year (fall-spring semester).
- 2) June 1st fall semester admission
- 3) October 1st spring semester admission
- 4) All applicants will be notified of their status within six weeks of the admissions deadlines.
- 5) We do not offer conditional admission. We do not offer early admission.

Admission Requirements---Regular status (We do not offer conditional admission.)

- 1) Bachelor's degree in biology or its equivalent with an overall grade point average of at least a 3.0 on a 4.0 scale.
- 2) Graduate Record Examination (GRE) or Medical College Admission Test (MCAT):
 - a) GRE General Test; 300 minimum combined score on the verbal and quantitative sections (1000 on the old scale).
 - b) 24 Minimum MCAT cumulative score (PS+VR+BS) may substitute for all GRE scores
 - c) GRE and MCAT scores are valid for five years.
- 3) Official transcripts for all college-level courses.
- 4) Applicant's statement of interest
- 5) Two letters of recommendation.
- 6) A written acknowledgement from one (or more) of our Faculty who agrees to place the student in their lab and serve as the student's major advisor, if the student is accepted. The applicant does not submit anything to ODU Admissions Office about the advisor---the Faculty member will notify the Graduate Program Director of their willingness to be your advisor.

Regarding major advisors, it is the responsibility of the applicant to contact a professor(s) and make arrangements for placement in their laboratory. This process allows the student to evaluate the research and funding opportunities of a potential advisor. It is our suggestion that you be prepared to explain why you are specifically interested in their lab, include information about your academic credentials, skills, and future plans. And of course, you can gather information about research projects and funding available for new students.

An individual professor may agree or decline to serve as the major advisor based on criteria relevant to their research program. If an applicant is offered a place in more than one laboratory, then the student will select their major advisor upon entering the program. Although required for admission, the choice of advisor is not binding and the student may be able to change their advisor if the situation warrants it.

List of Biology Faculty

- 7) English Proficiency Requirement for Non-Native Speakers of English: 550 paper-based test, 213 computerbased, or 79 internet-based Test of English as a Foreign Language (TOEFL). On the International English Language Testing System (IELTS) we require a 6.5 overall.
- 8) Application form and application fee (\$50 as of January 2010).

Submission of application materials

Submit all materials to the <u>Office of Admissions</u> (applicants from USA schools) or the <u>Office of International</u> <u>Admissions</u> at Old Dominion University. There is a non-refundable \$40 application fee. However, if you have ever paid the application fee as a previous non-degree or degree-seeking student, or you are an ODU Alumni, the fee is not required.

Non-Degree Status Graduate Students

Non-degree status indicates that the student is taking graduate course work (500 level or greater) to satisfy individual needs or interests. Although non-degree students are not admitted to degree programs, they may receive graduate credit for graduate work passed. A maximum of 12 semester hours of non-degree graduate credit may be applied towards a graduate degree at Old Dominion University. Undergraduate transcripts are not required for initial registration, but must be submitted for graduate study beyond six hours. Application materials are available at the ODU Admissions website. Non-degree students interested in specific types of classes should contact <u>our Faculty</u> with expertise in those research areas for advice on coursework.

MASTER'S OF SCIENCE PROGRAM IN BIOLOGY

Department of Biological Sciences 110 MGB, 757.683.3595

Chair; <u>Wayne L. Hynes</u>, MGB 110, 757.683.3595, <u>whynes@odu.edu</u> Associate Chair, <u>Kneeland K. Nesius</u>, MGB 108C, 757.683.4193, <u>knesius@odu.edu</u> Assistant Chair; <u>Deborah A. Waller</u>, MGB 302B, 757.683.3601, <u>dwaller@odu.edu</u> Biomedical Sciences Ph.D. Graduate Program Director; <u>Robert E. Ratzlaff</u>, MGB 202G, 757.683.4361, <u>rratzlaf@odu.edu</u> Ecological Sciences Ph.D. Graduate Program Director; <u>Ian Bartol</u>, PSB 3120B, 757.683.4737, <u>ibartol@odu.edu</u> Master of Science Graduate Program Director; <u>Robert E. Ratzlaff</u>, MGB 202G, 757.683.4361, <u>rratzlaf@odu.edu</u> Biology Faculty

<u>The Department of Biological Sciences</u> provides a broad selection of course offerings. The degree program in biology allows for the selection of elective subjects most suited to the individual's vocational interests.

The curriculum for the Master of Science program is developed around one's interests such as: botany, ecology, immunology, infectious diseases, marine biology, microbiology, physiology, reproductive biology, systematic biology, and zoology. In addition, there are two specially designed concentration areas in biotechnology and wetland ecology. Facilities in the Department of Biological Sciences include: electron microscopy, terrestrial and aquatic animal care facilities; biomechanics, environmental pollution, marine benthic ecology, biotechnology, spectroscopy, cell culture, protein separation, DNA sequencing, GIS (Geographic Information System), digital imaging, a greenhouse, herbarium, zoological museum, animal facilities, and field science wet laboratories. In addition, excellent opportunities exist for research and instruction off-campus at field research sites including: Blackwater Ecological Preserve, Virginia Coast Reserve-Long Term Ecological Research Site, Virginia Institute of Marine Sciences Eastern Shore Marine Laboratory, and other regional agencies and facilities.

Two degree options are available — a total of 31 graduate credits for the thesis option, 37 credits for non-thesis.

Graduate Courses

A list of all graduate classes is available in the University Graduate Catalog.

Biology Course Rotations as anticipated for the next two years.

<u>ODU Schedule of Classes</u>. This site has registration information and the list of all ODU courses offered in the current academic year.

Master of Science - Biology

Many pertinent graduate courses are offered for the Master of Science in Biology programs that can be applied toward the degree requirements. A program of study is developed by the student with approval of advisory committee and the Graduate Program Director.

Master of Science - Biotechnology Concentration

The biotechnology program is designed to enable the student to learn basic skills in cell and molecular biology, with the flexibility to develop a curriculum in the areas of infectious diseases, immunology, physiology, or environmental molecular biology.

Biotechnology students are required to take five core courses in addition to the research and presentation requirements; Molecular and Immunological Techniques (BIOL 507), Cellular and Molecular Biology (BIOL 523),

Introductory Biochemistry (CHEM 541), Intermediate Biochemistry (CHEM 543), and Molecular Genetics (BIOL 755). The remaining coursework is selected according to the interest of the student, with the guidance and approval of the student's faculty advisory committee.

Master of Science - Wetland Biology Concentration

The wetland biology concentration has been structured to contain essential clusters in the following disciplines: plant identification, wetland and aquatic ecology, soils and hydrology, regulation, technical application, topical seminars, internships, and research and/or thesis. Recommended course are: Wetland Plants (BIOL 519), Principles of Plant Ecology (BIOL 550), Introductory Soils (OEAS 508), Wetland Hydrology (OEAS 622).

Admissions Decision Process

The Graduate Program Director assembles the application materials and generally maintains all Masters graduate records in the Department of Biological Sciences. Immediately following the application deadlines, the GPD will complete the application files, summarize information about each applicant, and ensure that all information is available for faculty review. Faculty members who agree to advise one or more of the application and receiving faculty input. The GPD makes the final admissions decision after reviewing each application and receiving faculty input. The GPD will ensure that all applicants are notified of admissions decisions within 4-6 weeks of the application deadline.

FINANCIAL AID

Establishing Eligibility for In-state Tuition Rates

Graduate Teaching Assistantships

The GTA stipend is currently set at \$7500 per semester. For the summer session the amount is dependent on the number of credits taught. Students pay in-state tuition rates regardless of legal residence and must be enrolled for nine hours (three hours in the summer session). Additional tuition assistance may be available. The expected workload for a GTA is 20 hours per week with a maximum of 9 lab-contact hours per semester or a maximum of 6 classroom (teaching/lecturing) contact hours per semester.

The process of awarding GTA is based on the overall teaching needs within the Department of Biological Sciences, the goals of our graduate programs, and the overall progress of the applicant in the program. All GTA applicants are ranked by the Graduate Program Directors in February/March and the list submitted to the Assistant Chair. The Assistant Chair is responsible for the administration all GTA issues which include the notification of all GTA applicants about awards and contracts, teaching assignments and evaluations.

Graduate Research Assistantships

The GRA stipends are generally matched to GTA levels; contact individual faculty for the details about assistantships funded through their grants and contracts. The expected workload for a GRA should also be discussed with the person responsible for the funding. Students pay tuition based on their legal residence and must be enrolled for six hours per semester (three hours in the summer session).

Tuition Support

Financial support for graduate tuition is awarded each semester and in the summer session with deadlines announced in advance. Awards are made based on student performance and need and may cover only a portion or all tuition costs. The University classifies tuition support; tuition assistance, tuition waiver, tuition grant, etc., which in some cases, may require that students be reimbursed for their tuition costs. Undergraduate courses are not eligible for tuition waivers even if required by the advisory committee.

Scholarships

The Virginia S. Bagley Endowed Scholarship is made possible by Mrs. Bagley's estate and is awarded to a graduate student in the Department of Biological Sciences.

The Harold G. Marshall and Vivian J. Marshall Scholarship in Biology is awarded to a full-time graduate student who demonstrates scholarship and/or service in the area of Biological Science with a specific concentration in ecological areas.

The Nick Savage Scholarship

Contact the Chair in the Department of Biological Sciences for additional information.

The Claire Dabel Scholarship

Contact the Chair in the Department of Biological Sciences for additional information.

The Ferraro Foundation for Science and the Disabled

Contact Dr. Deborah Waller for additional information.

Graduate Financial Aid; Scholarships, Grants, Loans, and Student Employment. (See the latest version of the <u>University Graduate Catalog</u>.

Work Study Funding for Graduate Students

For details contact the Office of Student Financial Aid.

Student Health Insurance & Plans

OTHER POINTS OF INTEREST

Entertainment, activities, etc

ODU International student organizations

<u>Virginia Opera</u> is one of the finest regional opera companies in the nation and is the only company to perform regularly in <u>three separate main stage venues</u>.

<u>Virginia Stage Company</u>, a not-for-profit, professional resident theater company, enriches, educates and entertains the region by creating and producing theatrical art of the highest quality and worthy of national prominence.

<u>Virginia Symphony</u> is recognized as one of the nation's leading regional symphony orchestras, the Virginia Symphony has enriched the cultural life of the Hampton Roads community nine decades.

<u>The Virginia Arts Festival</u> Each spring, internationally acclaimed artists from around the globe team up with the best of the region's own professional arts organizations to present a dazzling lineup of music, theatre and dance.

<u>The Hampton Arts Foundation</u> is the umbrella under which The American Theatre, The Charles H. Taylor Arts Center and the new Gordon-Kearney wing of the Theatre operate in a unique public/private partnership with the City of Hampton.

<u>The Chrysler Museum of Art</u> combines, under a single administrative umbrella, one of America's great fine arts museums and two significant historic houses.

The Contemporary Art Center of Virginia

The Baron and Ellin Gordon Art Galleries

<u>The Mariner's Museum</u> collection totals approximately 35,000 artifacts, of which approximately one-third are paintings and two-thirds are three-dimensional objects.

The Sandler Center for the Performing Arts

The Attucks Theatre

Verizon Wireless Virginia Beach Amphitheater

nTelos Wireless Pavilion

<u>The Norva</u>

The Norfolk Tides are the Triple-A affiliate of the Baltimore Orioles, and a member of the International League.

<u>The Norfolk Admirals</u> are a minor professional ice hockey team in the American Hockey League, and affiliate of the Tampa Bay Lightning.

Business, government information

<u>The Virginian-Pilot</u> (local newspaper)

Veer Magazine (alternative source for news, arts, culture, and entertainment)

GLBT Live Radio

Norfolk International Airport News/Williamsburg International Airport

5 Points Community Farm Market

City of Norfolk City of Virginia Beach

Other local and regional information

Colonial Williamsburg Jamestown, and Yorktown Outer Banks of North Carolina

Norfolk Parks and Recreation (includes other activities in the area)

<u>Norfolk Utilities Water Resources: Boating on Norfolk's reservoirs</u>; Fishing stations, boat ramps, maps, etc. Kayaks are allowed with a boating permit.

Great Dismal Swamp Hoffler Creek Wildlife Foundation

Northwest River Park

First Landing State Park Kiptopeke State Park

Chippoke Plantation State Park

Chippokes Farm and Forestry Museum

Virginia daytrips