

**Graduate Studies
in Nuclear and Particle Physics**



Nuclear Physics Group:

Experimental Faculty:	6
Theoretical Faculty:	6
Jefferson Lab Professors:	3
Research Assistant Professor	1
Postdoctoral Researchers:	3
Graduate Students:	16
Female Graduate students:	6
[Accelerator Physics Faculty:	5+3]

Fellows of the APS:

8 in Nuclear Physics, 14 total

Application deadline:

January 15th to be fully considered for financial support

General university information:

<http://www.odu.com>

Departmental web site:

<http://sci.odu.edu/physics/>

Application site:

http://sci.odu.edu/physics/graduate/graduate_overview.shtml

For admissions questions, contact

Dr. L. Weinstein:

weinstein@odu.edu

Contact:

Dr. Sebastian Kuhn

(757) 683-5804

skuhn@odu.edu

Dr. Raul Briceño

(757) 683-5813

rbriceno@odu.edu

General Information:

Old Dominion University is a state-supported Carnegie Research-I institution with more than 24,000 students and over 720 full-time faculty. Norfolk, Virginia is a culturally rich, historic city and a major international maritime center in a metropolitan area of over 1.7 million people. One of seven cities that form the Hampton Roads region, Norfolk is located near the mouth of the Chesapeake Bay in coastal Virginia. Nearby attractions include Virginia Beach, the historical “triangle” of Williamsburg, Yorktown and Jamestown, and many cultural organizations and entertainment venues.

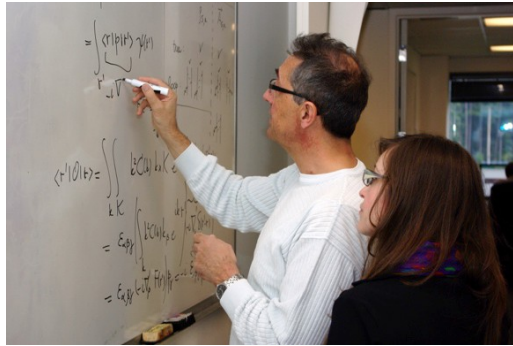
The ODU Physics Department has strong research groups in experimental and theoretical nuclear and particle physics, experimental and theoretical atomic and few-body physics, accelerator physics, condensed matter physics, and materials science, and offers B.S., M.S. and Ph.D. degrees. The department has 23 tenured or tenure-track faculty and six special appointment Jefferson Lab Professors and is supported by substantial external, peer-reviewed research grants as well as state funds. Fourteen faculty members are APS Fellows. The vibrant program includes about 50 graduate students and more than 80 undergraduate majors.

Nuclear physics research areas:

- The quark structure of matter studied at the nearby Thomas Jefferson National Accelerator Facility (Jefferson Lab, about a half hour drive from ODU) and other international user facilities.
ww2.odu.edu/~skuhn/NucWebsite/ODUExperimentalNuclearPhysicsGroup.html
- Theoretical research in high-energy QCD, Lattice QCD, nucleon structure, light nuclei and relativistic dynamics in hadrons and nuclei.
ww2.odu.edu/~jdudek/NucTheory/nucltheory.html

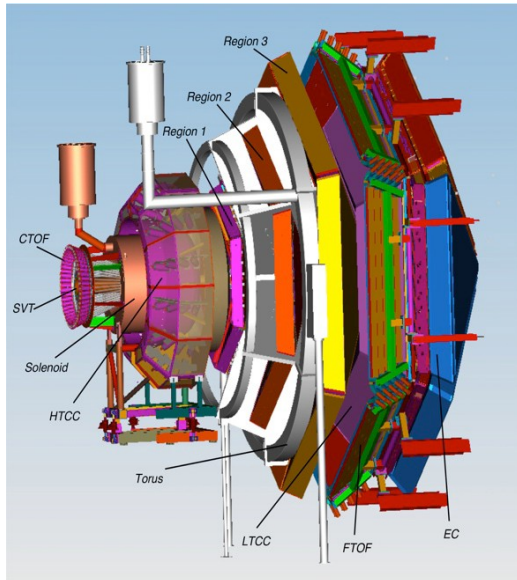
Students doing research at Jefferson Lab have all the advantages of working at an international laboratory while being stationed at their home institution.

Old Dominion University continued



Theoretical Research

The ODU theory group performs research across a broad range of topics in hadronic and nuclear physics, including the electroweak properties of light nuclei, chiral perturbation theory, hadron structure, the properties of nucleons at large energy scales and quantum chromodynamics. This work is of relevance to experiments across the globe, with particular emphasis on experiments performed at the nearby Jefferson Lab. All faculty in the ODU Theory Group are also staff scientists with the Jefferson Lab Theory Group. Graduate students in the group have access to facilities and resources of the Jefferson Lab Theory Center.



Experimental Research at Jefferson Lab

As one of the largest University groups working at Jefferson Lab, the ODU experimental nuclear physics group leads experiments on the form factors and quark-gluon structure of the nucleon, on studies of hadron spectroscopy and decays, on the role of short-range correlations in nuclear structure and on searches for new physics. We helped formulate the Jefferson Lab research program for its recent upgrade to 12 GeV beam energy, have built and continue to build major detectors and other equipment for this program, and are actively planning the next generation facility, the electron-ion collider. The group typically receives about \$1M funding per year from various sources, mainly from the US Department of Energy.



Facilities at Old Dominion University

The experimental nuclear physics group has 5000 square feet of laboratory space, including a high-bay area in the Physical Sciences Building II, which also contains offices for faculty, postdocs and students. The group maintains a LINUX farm for physics analysis and simulation. Standard laboratory equipment and infrastructure allows construction of large detectors for research (e.g. the Region 2 Drift Chambers for the CLAS12 spectrometer at Jefferson Lab, see image to the left). A full-time technician and three postdoctoral researchers are part of the group.

Synergistic research: Center for Accelerator Science - www.odu.edu/sci/research/cas