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Ph.D. Program in Applied Chemistry

Introduction

Delaware State offers one of the few Applied Chemistry Ph.D. programs nationwide, and the only one in the state of Delaware. Students have an opportunity to stand out in a specialized field, developing marketable expertise that advances their career prospects.

Doctoral candidates immerse themselves in research, taking advantage of the department?s advanced lab facilities and technology, as well as the experience of our high-achieving faculty. Delaware State?s traditional research emphases lie in hydrogen storage, polymer chemistry, biochemistry, and environmental chemistry. However, each doctoral candidate is encouraged to pursue his or her own interest. Students get every opportunity to shine, establishing their credentials as independent researchers, writers, and analysts.

Professional Preparation

The Applied Chemistry Ph.D. opens the door to leadership positions in a wide range of industries. Graduates possess superior laboratory, research, and analytical skills, along with a track record of independent research. This extremely marketable degree can lead to employment in professions such as

- medical research
- drug manufacturing
- renewable energy
- environmental protection and restoration
- biotechnology

Faculty

The Delaware State chemistry faculty boasts a number of accomplished researchers. Faculty members have secured major grants from the National Science Foundation, National Institute of Health, Department of Energy and other national funders to do ground-breaking research in areas such as hydrogen fuel cells, forensic chemistry, environmental chemistry, and pharmaceuticals. In addition to offering research opportunities and guidance, DSU professors help graduate students establish professional and academic networks to support their careers.

Research and Experience

Delaware State has nine chemistry research labs and three multipurpose labs, all equipped with high-end instrumentation and advanced computer technology. Students have access to

equipment such as

- gas chromatographs with a variety of detectors
- a head space auto sampler for gas chromatograph
- a gas chromatograph /mass selective detector/infrared detector/computer system
- nuclear magnetic resonance spectrometer
- instrumentation for flame and flameless atomic absorption, dispersion infrared and FTIR
- ultraviolet-visible spectrophotometers
- high performance liquid chromatograph with data collection system
- electroanalytical system
- X-ray powder diffraction unit
- Thermal gravimetric analyzers

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