CHEMISTRY AND PHYSICAL SCIENCES

PLV

FACILITIES

The Dyson Hall of Science, a state-of-the-art multidisciplinary science research and education facility, includes an integrated research and teaching space and the latest experimentation equipment.

DEPARTMENT CONTACT

For more information, contact:

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The Department of Chemistry and Physical Sciences on Pace University's Westchester campus offers a **Bachelor of Science (BS)** degree in **Chemistry**, certified by the American Chemical Society. A prestigious seal of approval by the world's chemists, this accreditation establishes Pace University as one of the nation's foremost universities and colleges in the field of chemical and physical sciences. We also offer a BS degree in **Chemical Biology** and a BS degree in **Pharmaceutical Sciences**.

Throughout our curriculum, we facilitate student learning and success through the power of chemistry as integrated with case studies in a variety of topical areas of study. Real-life examples include chemical biology, clinical, medicinal, and pharmaceutical chemistry, environmental and forensic chemistry, food and feed chemistry, nutrition and diet, and advanced materials and energy. We are committed to excellent teaching, scholarly growth, and service, while providing a nurturing environment for our students. We not only aim to ensure students learn what they need to be successful scientists and citizens of the world of today, but also to instill in them the ability to learn how to learn so that they can continue to grow with the ever-expanding knowledge of the 21st century.

BS IN CHEMISTRY

The study of chemistry is both challenging and rewarding. It is a central science offering a wide range of career options. By prudent selection of elective courses, in consultation with faculty advisors, chemistry majors may choose a specialization in pre-medical, pre-dental or pre-veterinary studies. They may also elect to specialize in such areas as environmental, forensic, or industrial chemistry or management science.

BS IN CHEMICAL BIOLOGY

The interdisciplinary Chemical Biology major integrates the principles and theories of chemistry, biology, and biochemistry. Hence, a chemical biology graduate is capable of carrying research, development, technology transfer, and product formulations in a broad plethora of sub-disciplines, bridging the central scientific power of chemical science as applied to deciphering, solving, charactering, effectuating change in, and optimizing biological processes.

BS IN PHARMACEUTICAL SCIENCES

The interdisciplinary Pharmaceutical Sciences major integrates fundamental principles of natural, physical and organic chemistry, biochemistry, and biology to understand how to synthesize de novo medicine and optimize its delivery to the human body, as well as translate this integrated understanding into new and improved therapies against human disease.

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PROFESSIONAL PREPARATION

Our graduates have an excellent rate of success; they are always in great demand and have higher than average admittance rates in medical and other health-related schools. We are committed to excellent teaching, scholarly growth, and service, while providing a nurturing environment for our students. We not only aim to ensure students learn what they need to be successful scientists and citizens of the world of today, but also to instill in them the ability to learn how to learn so that they can continue to grow with the ever-expanding knowledge of the 21st century.

FACULTY

Our faculty members are actively engaged in a broad variety of research projects which often involve their students. Research topics include the following:

Karen Caldwell: Remediation of interior building surfaces contaminated by methamphetamine.

Irina Gazaryan: Neuroprotective effect of HIF prolyl hydroxylase inhibition.

Cihan Gunduz: Synthesis and characterization of heterocyclic molecules and their crown ethers derivatives' cation bonding and fluorescence properties.

Sergey Kazakov: Hydrogel/lipid membrane assembly: modeling membrane system of cell; hydrogel nanoparticles, lipogels, nanofilms, liposomes. and lipid membrane synthesis manipulation and characterization; synthetic and natural ionic reservoirs; bioanalytical devices, drug delivery and control release systems.

Mary Minnis: Geographic information systems (GIS), consumer chemistry, and environmental chemistry.

David N. Rahni (Chair): Bio-electro-analytical chemistry; development of bio-sensors and bio-actuators for in-vivo monitoring or the in vitro assay of key metabolites in tissues or bodily fluids; environmental, forensics, and neuroscience.

Mohsen Shiri-Garakani: Quantum spacetime, unified gravity, foundations of quantum theory, quantum logic, history and philosophy of physics, applications of physics in complex system theory.