Innovative STEM Opportunities at the University of Richmond

URISE

The University of Richmond has embarked upon an exciting new initiative– the University of Richmond Integrated Science Experience (URISE). URISE aims to increase the number of students from groups traditionally underrepresented in the sciences who complete a major and continue to graduate and professional programs in science. Through a competitive process, fifteen students per year will be chosen as URISE scholars, based on their ability to demonstrate a strong interest in science and math and their potential for success in the URISE program. This program is ideal for students considering science majors, including those interested in biomedical research. Defining features include: a 5 week paid pre-freshman summer experience that includes participation in a cutting-edge scientific research project as well as numerous team- and skill-building activities; 4 units of thematically based integrated science/math in the first year [either in the integrated quantitative science (IQS) or science math and research training (SMART) courses]; close faculty and peer mentoring; and a 10 week paid summer research experience the summer after the first year.

SMART

Beginning with the Class of 2017, Richmond will offer a year-long course for first-year students that combines an interdisciplinary biology-chemistry course with a corresponding two-semester calculus course. SMART (Science, Math, and Research Training) is designed for incoming students who are passionate about science, but who have little to no calculus background. Key concepts in biology and chemistry will be explored in the classroom and laboratory through themes such as antibiotic resistance, HIV-AIDS, cancer, sickle cell anemia, and biological development. The calculus course will take a mathematical modeling approach, with key concepts linked to topics in the biology-chemistry course, and examples taken from the sciences.

IQS

Since 2009, Richmond has offered a year-long course for first year students passionate about multiple scientific disciplines that integrates key concepts in introductory biology, chemistry, computer science, mathematics, and physics. IQS (integrated quantitative science) is designed for incoming students who have had previous coursework in both calculus and physics. Key concepts from all five disciplines are integrated and explored in the classroom and laboratory through themes such as challenges of a changing planet and mechanobiology/ human disease. Upon completion of IQS, students receive credit for the first semester courses in biology, chemistry, computer science, mathematics, and physics, and are guaranteed a highly mentored 10 week paid summer research experience in the summer after their first year.

To learn more about our innovative science initiatives for underrepresented STEM students at Richmond, please visit our website at: http://as.richmond.edu/hhmi/