Honors RAP: Engineering

Honors students admitted to Engineering will be eligible to join the Engin Honors RAP. Students in this program will be living in Sycamore Hall, one of the first-year buildings in the Commonwealth Honors College Residential Community. All Engin Honors RAP students will be housed with another member of the Engin Honors RAP and enroll in a section of ONE of the following math or sciences courses. Students will choose the class with their academic advisor during the Summer NSO.

*No application is required for this Honors RAP; sign up is on a first-come basis, for detailed information and specific steps, see How to Join a RAP.*

**Related Courses:**

Math 131H: Calculus 1

Calculus 1 - Continuity, limits, and the derivative for algebraic, trigonometric, logarithmic, exponential, and inverse functions. Applications to physics, chemistry, and engineering. Students expected to have and use a Texas Instruments 86 graphics, programmable calculator. Prerequisites: high school algebra, plane geometry, trigonometry, and analytic geometry. There will be some emphasis on the underlying theory, that more applications will be included, and that some attention will be paid to history. Active student participation will be encouraged.

Math 132H: Calculus 2

Calculus 2 - The definite integral, techniques of integration, and applications to physics, chemistry, and engineering. Sequences, series, and power series. Taylor and MacLaurin series. Students expected to have and use a Texas Instruments 86 graphics, programmable calculator. Prerequisite: MATH 131 or equivalent. There will be some emphasis on the underlying theory, that more applications will be included, and that some attention will be paid to history. Active student participation will be encouraged. Recommended for Freshmen, Sophomores; Majors, Non-majors.

Math 233H: Multivariate Calculus

Multivariate Calculus - Techniques of calculus in two and three dimensions. Vectors, partial derivatives, multiple integrals, line integrals. Prerequisite: MATH 132, or 136. Students expected to have and use a Texas Instruments 86 graphics, programmable calculator. There will be some emphasis on the underlying theory, that more
applications will be included, and that some attention will be paid to history. Active student participation will be encouraged.

Chem 121H: Honors General Chemistry

Honors General Chemistry - Basic Principles of chemistry. Microscopic nature of atoms and molecules; macroscopic properties of chemical systems. Topics include stoichiometry, atomic and nuclear structure, chemical bonding, molecular structure, gases, and intermolecular forces. Includes laboratory. More extensive lecture treatment of advanced topics and laboratory work than CHEM 111.

Honors 201H - Commonwealth Honors Seminar - Ideas that Change the World

In this interdisciplinary, discussion-based seminar, students will examine innovative thinkers, groundbreaking ideas, and the strategies that transform these ideas into effective actions.

The course explores dilemmas addressed by the sciences, the arts, and the humanities. In each of these broad areas, the course focuses on questions about human nature, the sources of our knowledge, and the application of that knowledge to the solving of perennial and contemporary problems. The semester begins with inquiries into the nature of truth, of particular relevance in our era of debates over “alternative facts.” Then the course considers ongoing problems of violence, injustice, and environmental crisis. Our inquiries will establish a dialogue between past and present as we examine historical figures such as W.E.B. Du Bois, Rachel Carson, along with present-day innovators such as Temple Grandin and the Dalai Lama.

More details about the course