Have you ever wondered what it would be like to work in a research laboratory? Are you tempted by novel discoveries and cutting edge research?

The PHAGES (Phage Hunters Advancing Genomics and Evolutionary Science) program at UAB is a unique hands-on research experience for incoming freshman and rising sophomores.

Course Description

The Phage Genomics Research Course series is a two-semester research course series that builds on themes and techniques from across biology including microbiology, molecular biology, microscopy, genomics, and bioinformatics

BY213: Phage Genomics I (Honors). 4 credits. Fall, MW 1:30-4:30pm.

During the fall semester, students isolate bacteriophage from environmental samples, purify viruses using standard wet-laboratory protocols, prepare samples for electron microscopy, and isolate viral DNA. The fall course also emphasizes critical reading of scientific research articles.

During winter break, viral DNA samples are sent for full-genome sequencing.

BY214: Phage Genomics II (Honors). 4 credits. Spring, MW 1:30-4:30pm.

Throughout the spring semester, students annotate a selected phage genome and perform comparative genomics. Additional wet-laboratory experiments may be performed as time permits. Annotated sequences are submitted to GenBank and all students in the course are included as authors on the GenBank submission. The spring course also emphasizes scientific writing. All students in the course will present a collaborative poster at the UAB Undergraduate Research Expo.
To promote communication and collaboration, UAB faculty and 1-2 students will travel to HHMI at the end of the spring semester to present the class research findings at an HHMI-sponsored SEA research symposium.

**How do I join the program?**

Students enrolled in the UAB Honors College should discuss their interest in the Phage Genomics program with their advisor. Any interested Honors College student that is an incoming freshman is welcome to register for BY213 (Fall) and BY214 (Spring). Space is limited to 16 registrants.

Students not enrolled in the UAB Honors College who are interested in the Phage Explorations program should discuss their interest with their advisor and submit an application. Preference will be given to students enrolled in the UAB Honors College.

**Can I apply credit hours earned in BY213/BY214 to my degree?**

*BY213(Honors)* and *BY214(Honors)* can be used to satisfy Honors credit hour requirements for the UAB Honors College. Students enrolled in the Science and Technology Honors program can take BY213/BY214 in place of STH201.

For Biology majors, satisfactory completion of BY213 and BY214 can substitute for both BY 245 (required for the Molecular track) and BY398 (required to enter BY498 - Honors Research). BY213/BY214 can also fulfill Biology elective credit hours.

**Questions?**

For information regarding the course, please contact the course instructor, Dr. Denise Monti at dmonti@uab.edu. Additional information can be found at: www.uab.edu/explorations

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**About Howard Hughes Medical Institute (HHMI)**

HHMI, a non-profit medical research organization that ranks as one of the nation's largest philanthropies, plays a powerful role in advancing biomedical research and science education in the United States. The institute spent $730 million for research and distributed $101 million in grant support for science education in fiscal year 2009.

**About the UAB Department of Biology**

The UAB Department of Biology is a dynamic academic partnership that provides a broad-based graduate and undergraduate curriculum. Most members of the graduate faculty have research specialties in comparative biochemistry, physiology and eco-physiology of aquatic organisms. A second, important department research focus is environmental microbiology.