



The Pre-College Program in Computational Biology

Explore the cutting edge of modern biology research through both computation and hands-on lab research in our summer Pre-College Program in Computational Biology. The program, unique to Carnegie Mellon University, allows you to conduct real research and gain valuable skills. Programming knowledge is a plus, but not required. If you love biology and math, we'd love to have you.



WHAT COMPUTATIONAL SKILLS WILL I LEARN?

- Gain fundamental programming skills in a new language.
- Model and solve biological problems computationally.
- Implement fundamental algorithms of modern biology.
- Apply your code to the real datasets you generate in the lab.
- Visualize complex computational analyses to draw conclusions.
- Present your work to peers and family at our closing event.

WHAT WILL I DO IN THE LAB?

- Explore Pittsburgh's three rivers on a state-of-the-art science vessel.
- Capture water samples and isolate the bacteria they contain.
- Extract and sequence bacterial genomic DNA.
- Visualize DNA with electrophoresis.
- Identify antibiotic-resistant bacteria in your samples.
- Control robotically driven lab automation equipment.



Computational
Biology
Department

5000 FORBES AVENUE
PITTSBURGH, PA 15213-3890

   @CMUCompBio

cbd.cmu.edu

INTERESTED? JOIN US!

*Full scholarships are available for
socioeconomically underprivileged students.*

To apply, visit cmu.edu/pre-college/admission