

UC COMBO

University of Chicago COMPutational Biology Outreach

FALL NEWSLETTER 2024



Gunsaulas Scholastic Academy

We had an amazing time teaching our "Cracking the Genetic Code" workshop at Gunsaulas Scholastic Academy (GSA), where we introduced 6th graders to Python and the genetic code. Over three classrooms, our volunteers guided students in decoding the luciferase gene, and in making their very own luciferase bead bracelets.

This was our third time running the workshop at GSA, and it was incredible to see the students' excitement as they tackled coding challenges and connected it to real-world biology.

South Side Science Festival

At the South Side Science Festival, we brought our new phylogenetics workshop, where participants built phylogenetic trees using both morphology and DNA sequences. The activity was a hit, drawing in a diverse crowd—from toddlers as young as three to curious older adults.

WHAT WE'VE BEEN UP TO

Chicago Center for Teaching and Learning workshop

A group of our volunteers had the great opportunity to attend a workshop hosted by the Chicago Center for Teaching and Learning, where they explored best practices for effective and inclusive teaching.

This experience allowed them to reflect on their own approaches and provided valuable insights into how these methods can enhance our outreach workshops. Keep an eye out for more volunteer training opportunities like this one!

Our website got a revamp!
Check it out at
<https://uccombio.github.io>

What is one thing you want to learn more about?
42 responses

How to become a human calculator decoder of gene proteins.

anonymous GSA student, 6th grade

Our students have clear ambitions!

WE ARE RECRUITING!

Meet the leadership team

Director

Maggie Steiner

Leads COMBO's internal operations and leadership team. Oversees meetings, strategic initiatives, and recruitment efforts.



Communication Chair

Jennifer Blanc

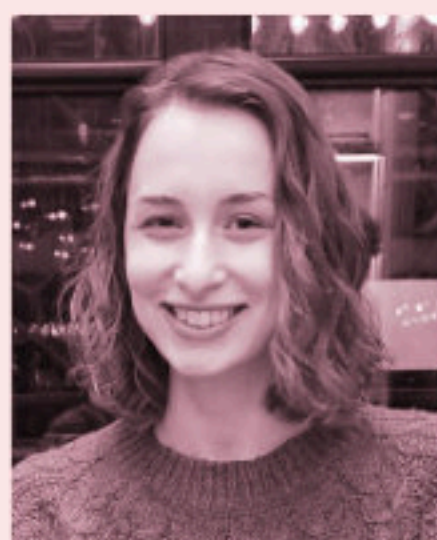
Connects with schools and teachers to coordinate and create new opportunities for COMBO events.



Scientific Content Chair

Liz Gibbons

Leads the scientific content team, which is responsible for the creation and organization of educational content for our workshops.



Volunteer Coordinator

Ethan Zhong

Recruits and supports volunteers for events, organizing logistics and ensuring they're equipped to deliver amazing workshops.

Marketing Chair

Marida Ianni-Ravn

Crafts quarterly newsletters, manages the website, and creates promotional materials such as flyers and banners.



Joining the Content Team

Joining the content team at COMBO is a fantastic opportunity for anyone passionate about creating teaching materials, such as lesson plans, Jupyter notebooks, or hands-on arts and crafts activities.

As a member, you'll contribute to designing engaging educational content while collaborating with like-minded individuals. The team meets weekly to brainstorm ideas and share progress, offering flexibility to match your availability and interests.

If you'd like to learn more about any of these roles, we'd love to hear from you!

Our leadership meetings are always open to anyone curious about how we operate, and what's going on behind the scenes.

You can drop us an email at

uccombio@gmail.com

Who are we?

We are a group of graduate students, postdocs, researchers, and professors at the University of Chicago. We are passionate about sharing our love of computational biology with Chicago area middle and high school students!

What do we do?

We run single and multi-day interactive workshops that both introduce students to foundational programming concepts through real-world biological problems and expose them to careers in the biomedical sciences. Our workshops feature short lectures on computational biology, guided and project-based coding sessions where students work through interactive workbooks, and talks by a diverse scientists at UChicago about their research and path to becoming a scientist. We have workshops designed for both middle and high school students and can customize to fit the needs of potential partners.

What's our mission?

As the scale of data grows, computational skills are increasingly important in all areas of biological sciences. However, coding and computational science often appear "scary" and unapproachable to students and it's often difficult to know where to start! Our mission is two-fold. First, we aim to demystify coding by providing guided workbooks that require no pre-installation and focus on real-world problems in biology rather than syntax and rote memorization. Second, we hope to inspire the next generation of diverse scientists by exposing students to a wide-array of career paths in computational biology and demonstrating the importance of computational skills across disciplines.