



## Existing Education and Outreach Programs

These resources offer opportunities to contribute to established programs and/or partner to create focused educational initiatives, events, or curricula. Please use the contact information listed to inquire about current programs relevant to your interest.

### **Astronomy Conversations Program at Adler**

Contact: [Randall H. Landsberg](#), Director of Education & Outreach, Kavli Institute for Cosmological Physics (KICP)

This program directly connects over ten thousand museum visitors each year to UChicago scientists and their research. Multiple times each week, researchers invite visitors to share in the excitement of discovery while presenting positive role models. They engage the public in dialogs using the visual resources of Adler's Space Visualization Lab (SVL) to display their data and experiments.

### **Big Data Traveling Exhibition**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Undergraduate and graduate students work with Dr. Aprison to plan a traveling big data exhibition for science museums and schools.

### **Collegiate Scholars Program**

Contact: [Abel Ochoa](#)

The University of Chicago Collegiate Scholars Program was founded in 2003 as a three-year program that aims to prepare talented Chicago Public Schools students in grades 10-12 for admission and success at the nation's top colleges and universities.

<http://collegiatescholars.uchicago.edu/>

### **Conte Center for Neuropsychiatric Genomics**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

After five years of NIH support, the Chicago Conte Center is pausing in its outreach projects, which have included Research Experiences for Undergraduates (REU) summer programs, Brain Awareness Days, and DNA Days.

<http://www.contechicago.org/education>

### **Cosmology Short Courses for Museum and Planetarium Staff**

Contact: [Randall H. Landsberg](#), Director of Education & Outreach

KICP's pioneering professional development courses for museum and planetarium staff help to bridge the gap between forefront research and the general public. Immersive three-day courses provide informal science educators with a solid foundation in current research, resources and experts to talk to. The impacts have been tremendous: new exhibits, new planetarium shows, and millions of individuals reached.

<http://kicp.uchicago.edu/education/courses/>



### **Expanding Your Horizons (EYH)**

Contact: [Young-Kee Kim](#)

A one day symposium for middle school girls showing them the exciting and diverse experiences science, technology, engineering and math (STEM) careers have to offer.

<https://sites.google.com/site/eyhchicago/>

### **Fermi Summer Interns Program in Science**

Contacts: [David W. Miller](#) and [Dave Schmitz](#)

Students will learn about science, computers, and electronics in a fun way, and will build electronic games and devise their own experiments to test scientific concepts.

<http://hep-outreach.uchicago.edu/>

### **Flipped Exhibits in High School Classrooms & iSTEM Learning Project**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Undergraduate and graduate students work with Dr. Aprison to design, prototype, implement, and evaluate a program to introduce portable science exhibits in high school biology classrooms.

### **Genes & Addiction NIDA Center for GWAS in Rats**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

High school and undergraduates work on 10-week summer research projects at collaborating Center institutions, including the University of California at San Diego, the University of Tennessee Health Science Center, the University of Michigan, the University of Buffalo, and the Medical College of Wisconsin. At the end of the program participants submit final reports and give talks at a University of Chicago REHU Symposium in the Gordon Center for Integrative Science.

<http://ratgenes.org/education/>

### **Gene Hunters & Learners Project**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Graduate students work with Dr. Aprison and colleagues at Stanford University and the University of Pennsylvania to develop an ecological genetics project to engage high school students and adults to participate as citizen scientists in an ecological genetics research project about *Drosophila melanogaster*.

### **Genes, Worms, Systems Biology, & Osmotic Stress**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Undergraduate and graduate students collaborate with Dr. Aprison and Dr. Schonbaum to produce “Genes, Worms, Systems Biology, & Osmotic Stress” lessons and investigations for Chicago high school biology classes. Grad students interested in developing a 10-week teaching project and receiving University of Chicago TA credit for science education must produce a plan that is approved by the high school, Dr. Aprison, and the BSD Graduate Affairs Office.

### **Homewood Science Center**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Graduate students collaborate with Dr. Aprison to plan a new science center in Homewood, Illinois.

<http://www.homewoodsciencecenter.org/>



### **Kavli Institute for Cosmological Physics (KICP)**

Contact: [Randall H. Landsberg](#), Director of Education & Outreach

The Kavli Institute aims to use cosmological physics and a center environment to broaden participation in the Science, Technology, Engineering, and Mathematics (STEM) workforce, prepare the next generation of teacher/scholars, and advance the public understanding and appreciation of science. The KICP has established a culture of outreach/science communication that engages hundreds of scientists each year, advances STEM diversity and increases scientific literacy and appreciation from K to grey.

<http://kicp.uchicago.edu/education/courses/>

### **KICP Museum Partnerships**

Contact: [Randall H. Landsberg](#), Director of Education & Outreach

The KICP collaborates with many museums including the American Museum of Natural History, the Exploratorium, the California Academy of Sciences, the School of the Art Institute of Chicago (SAIC) and the Adler Planetarium and Astronomy Museum. These collaborations have resulted in exhibits, documentaries, full-dome planetarium shows on current research and the active participation of researchers in museum programming. The KICP Astronomy Conversations program at Adler directly connects more than 10,000 museum visitors each year to UChicago scientists and their research. Several times each week, researchers invite visitors to share in the excitement of discovery while presenting positive role models. Researchers also engage the public using the visual resources of Adler's Space Visualization Lab (SVL) to display their data and experiments.

<http://kicp.uchicago.edu/education/partnerships/>

### **Life Long Learning (L3)**

Contact: [Randall H. Landsberg](#), Director of Education & Outreach, Kavli Institute for Cosmological Physics (KICP)

L3 involves interactive presentations and field trips to the Adler for older adults; and training and one on one coaching for presenters. It seeks to facilitate cognitive activity and social engagement among Chicago seniors, and to cultivate and improve communication skills among scientists. It brings current UChicago research (physics, astronomy, cosmology, and other topics) to Chicago senior citizens. Partners for this program include the Chicago Public Libraries, the Chicago Area Agency On Aging, senior centers, and local retirement communities.

### **Materials Research Science & Engineering Center (MRSEC)**

Contact: [Eileen Sheu](#), Director of Education and Outreach, MRSEC

The University of Chicago MRSEC is characterized by outstanding materials research of scope & complexity beyond a single investigator. To complement our research mission, we run programs to stimulate interdisciplinary education and the development of human resources by hosting workshops, providing research experiences to undergraduates and high school students, and promoting science at local schools and to the general public through our outreach activities. Current outreach activities include our science clubs, seminars for teachers, family science nights, museum exhibits, and the annual "Physics with a Bang! demo show and open house, designed to foster engagement with both our scientists and our research. We welcome new opportunities, collaborators, and audiences to broaden our impact.



### **Mind & Brain Annual Public Lecture Program, Grossman Institute**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Graduate students assist Dr. Aprison in helping the Grossman Institute plan and implement a public lecture series about neuroscience.

<http://neuroscience.uchicago.edu/public-lecture/>

### **Museum Partnerships**

Contact: [Randall H. Landsberg](#), Director of Education & Outreach, Kavli Institute for Cosmological Physics (KICP)

The KICP collaborates with many museums including the American Museum of Natural History, the Exploratorium, the California Academy of Sciences, the School of the Art Institute of Chicago (SAIC) and most importantly with the Adler Planetarium and Astronomy Museum. These collaborations have resulted in exhibits, HD documentaries, full-dome planetarium shows on current research, and the active participation of researchers in museum programming.

<http://kicp.uchicago.edu/education/partnerships/>

### **Museum of Science and Industry**

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Graduate students collaborate with Dr. Aprison and MSI staff to work on new exhibits for the 15-year-old Genetics: Decoding Life exhibition. Grad students interested in developing a 10-week exhibit prototype project and receiving University of Chicago TA credit for an informal science education initiative must produce a plan that is approved by MSI, Dr. Aprison, and the BSD Graduate Affairs Office.

<http://www.msichicago.org/explore/whats-here/exhibits/genetics-and-the-baby-chick-hatchery/>

### **National Resource Centers**

The University of Chicago offers a wide variety of programming for K-16 educators, students, and the general public through United States Department of Education designated Title VI National Resource Centers that cover East Asian (CEAS), East European & Russian/Eurasian (CEERES), Latin American (CLAS), and Middle Eastern (CMES) regions. Each Center independently organizes a wealth of lectures, conferences, film screenings, concerts, readings, and cultural events focused on their respective world regions. The Centers also collaborate to create K-16 outreach programming centered on professional development, pedagogy, and enhancing international and area studies content in classroom curricula. Annually, they sponsor the International Educational Conference and Summer Educator Institute that promote dynamic presentations, dialogues, and classroom activities for educators to use to inspire students in the classroom and beyond.

Center for East Asian Studies

<http://ceas.uchicago.edu>

Contact: [eastasia@uchicago.edu](mailto:eastasia@uchicago.edu)

Center for Latin American Studies

<http://clas.uchicago.edu>

Contact: [clas@uchicago.edu](mailto:clas@uchicago.edu)

Center for East European and Russian/Eurasian Studies

<http://ceeres.uchicago.edu>

Contact: [ceeres@uchicago.edu](mailto:ceeres@uchicago.edu)

Center for Middle Eastern Studies

<http://cmes.uchicago.edu>

Contact: [cmes@uchicago.edu](mailto:cmes@uchicago.edu)



### Neighborhood Schools Program

Contact: [Shaz Rasul](#), Neighborhood Schools Program

The Neighborhood Schools Program serves as a key support system for local schools and other institutions that support the general citizenry, providing tutoring to school children, teaching assistance to public school teachers, and administrative support to community organizations.

University of Chicago students gain valuable skills through their NSP placements while enriching their own understanding of how the urban education system functions. In the course of their work with our partner sites, they become integral members of the community in the schools and classrooms, and they serve as near-peer mentors and role models for younger students.

<https://nsp.uchicago.edu>

### Neuroscience Education Outreach Project

Contact: [Barry Aprison](#), Institute for Genomics & Systems Biology & GGSB

Graduate students work with Dr. Aprison and the Grossman Institute to develop high school lessons that include tracing, mapping, and annotating human brain neurons and circuits.

### Seminars for the Endorsement of Science and Mathematics Educators (SESAME)

Contact: [John Boller](#), Department of Mathematics

The SESAME program, designed for Chicago area teachers, offers math, science, and pedagogical courses used to fulfill Illinois State Board of Education (ISBE) requirements for middle school endorsements. These courses also suffice for teachers' professional development requirements along with adding Lane for salary increases.

<http://math.uchicago.edu/sesame/>

### Space Explorers

Contact: [Randall H. Landsberg](#), Director of Education & Outreach

The Space Explorers Program offers hundreds of hours of science enrichment activities to local high school students each year. Activities include weekly hands-on laboratories taught on campus, three-day winter and week-long summer residential science institutes held at Yerkes Observatory, field trips, college tours, and other enrichments.

<http://kicp.uchicago.edu/education/explorers/>

### The Oriental Institute

Contact: [oi-education@uchicago.edu](mailto:oi-education@uchicago.edu)

The Oriental Institute offers a mix of events and activities, including gallery tours, travel programs, hands-on workshops for children and families, exclusive members' programs, lectures, and rigorous adult education courses. The Oriental Institute is dedicated to engaging visitors of all ages and backgrounds with ancient cultures and the arts.

<https://oi.uchicago.edu/>



### **The Polk Bros./University of Chicago Program for Mathematics Teachers**

Contact: [Robert Fefferman](#)

The goal of this program is to improve the quality of mathematics instruction in the Chicago Public Schools at the elementary and middle school level. The Polk Bros./University of Chicago Program for Mathematics Teachers work with approximately 125 teachers from CPS per year and the program involves three courses for these teachers. Two of the courses run during the month of July, and one runs once per month during the academic year: There is a course on methods of math teaching and two which combine methods with a particular content area. The main goal of these courses is to allow teachers to escape from the point of view that mathematics is merely a painful memory game, and to have them understand that it is rather a beautiful and creative subject that they are able to take ownership of. The team will work with undergraduate or graduate students who are interested in the mission of the program, and who would enjoy interacting with the teachers and to serve as TA for the courses.

### **THE THINK TANK**

Contact: [Daniel Casasanto](#), Scientific Director

THE THINK TANK is a mobile neuroscience lab and education station, powered by the Experience and Cognition Lab at The University of Chicago to accelerate diverse participation in STEM (Science, Technology, Engineering, and Mathematics). We envision a scientific community that reflects the diversity found on our city's streets. Topped with a giant glowing brain, THE THINK TANK takes science to schools and sidewalks throughout Chicagoland and beyond to inspire a new, more diverse generation of thought leaders in STEM.

<http://thinktank.uchicago.edu/>

### **The University of Chicago Yerkes Observatory Education Program**

Contact: [Kate Meredith](#), Interim Director of Education and Outreach

One goal of Yerkes' mission is to grow and sustain a community of youth, educators and Science, Technology, Engineering, and Math (STEM) professionals that will foster life-long curiosity about the natural world and empower, reward, and amplify the efforts of learners of all ages. To that end, Yerkes Education Outreach provides educational opportunities and resources in a collaborative environment that combines the highest quality teaching and science expertise and is inclusive of all learners of any age.

<http://www.yerkesoutreach.org/>

### **UChicago STEM Education**

Contacts: [Debbie Leslie](#) and [Denise Porter](#)

UChicago STEM Education is a center devoted to research, development, and outreach related to PreK through Grade 12 education that resides within the Physical Sciences Division (PSD) of the University of Chicago. Our work comprises three components: (1) Research and Evaluation, (2) Tool Development, and (3) School Support Services. We work directly with teachers, schools, and districts nationwide, but have a particular interest and focus on partnerships that support local schools with developing and maintaining high-quality STEM education. <http://stemeducation.uchicago.edu/>



**Urban Readers Series**

Contact: [Anne Dodge](#)

A book event series at the Seminary Co-op, free and open to the public.

**The Young Scholars Program (YSP)**

Contact: [John Boller](#), Department of Mathematics

This is an enrichment program for mathematically talented seventh through twelfth graders in the Chicago region. Participants non-competitively explore math which is not typically taught in schools to increase their mathematical knowledge and promote continued interest in the subject.

<http://math.uchicago.edu/ysp/>

**@rtifice**

Contact: [Adam Hammond](#)

@rtifice has two branches: After school robotics clubs in public schools and a tech-based community center in Woodlawn. @rtifice is an independent, not-for-profit, all volunteer organization.

<http://www.artificechicago.org/>