Connect with us

Visit our website at **NationwideChildrens.org/Edu** for details on all of Nationwide Children's Hospital Community Education classes.

Nationwide Children's Hospital
Attn: Community Education
700 Children's Drive
Columbus, Ohio 43205-2696

W2876300 (10/26)

Mechanisms of Human Health and Disease 2027

A summer program for high school students who excel in science

Celebrating its 22nd year!

Mechanisms of Human Health and Disease (MHHD)

Monday and Thursday evenings: June 7 - July 19, 2027 from 5:30 – 9 p.m.
Postmarked or completed online applications **due February 12, 2027 at 8 a.m.**

Mechanisms is a fast-paced, in-depth program designed to challenge serious science students who are interested in medicine. Students in the Mechanisms program investigate diseases with lectures from medical experts. At the final class, students present their work to family and teachers. This course is lecture and activity based. This is not a shadowing program.

Purpose

Introduce motivated and high-achieving high school science students to college level curriculum for medical and biomedical careers.

Objectives

During the program, students will:

- Discuss college-level content in cellular and molecular biology, genetic engineering, physical and medicinal chemistry, immunology, virology, biomedical information and pathophysiology.
- Gain a competitive edge by developing life skills including networking, resume, writing, school selection, job applications, learning strategies and business communications.
- Complete an independent project in molecular pathophysiology.
- Complete an apprenticeship group project.
- Give a final presentation.

Info Sessions: *NEW! In-Person and Virtual*

Join us for virtual information sessions to be held on November 10 and January 19 from 6 to 7 p.m. Sign up at NationwideChildrens.org/Edu. We recommend attending in person but virtual option available.

Audience

Class is designed for rising seniors currently enrolled in 11th grade.
Other students who meet the prerequisites will be considered.

Prerequisites

High school biology and chemistry. **No exceptions.** Students must have access to a personal electronic device, such as a laptop or tablet (not a school-issued device) to participate. Coursework requires you to use your own laptop or iPad.

Class Size

We will accept up to 32 students.

Commitment

- Students **must** attend and participate in **all** class and group project sessions.
- Students will be required to read two books, before class begins.
- Students prepare for final presentation by creating an outline, final paper and presentation. The use of AI is not allowed.
- Plan to spend significant time outside of class to excel in this program, averaging 10 to 15 hours per week.
- Students who do fulfill these requirements will be released from the program.
- Optional hospital-based activities and outside field trips will be offered but are not mandatory.

Location

Nationwide Children's Hospital Education Center
575 South 18th St. | Columbus, Ohio 43205.

Cost

No application fee. $140 per student upon acceptance.

Confirmation

Students will be notified if they are accepted into the program **no sooner than April 2, 2027.**

Previous Student Successes

Mechanisms participants have enjoyed continued academic success enrolling in prestigious institutions including *U.S. News and World Report* top 20 ranked schools.

A Typical Class

The following is an example of a typical class period:

5 p.m.	Open Office Hours
5:30 p.m.	Speaker Panel
6:30 p.m.	Quiz
6:45 p.m.	College Level Course Information
7:15 p.m.	Pathophysiology Lecture
7:45 p.m.	Teaching Assistant Lecture
8:30 p.m.	Competitive Edge
8:55 p.m.	Wrap-up
9 p.m.	Adjourn

Questions

Contact **CommunityEducation@NationwideChildrens.org** or **(614) 355-0662**

Here's what some of our past participants had to say

"...this class challenged me and influenced my future decisions."

"I've never stuck with something this hard. I have learned it's more worthwhile than anything easy."

"Mechanisms...has shown me what I was meant to do in my future."

"This course was one of the most intellectually stimulating of my life."

Applications

You can apply electronically or by mail. **Do not apply both ways.** Students that apply by mail and online will be disqualified.

- **Electronic:** Log onto NationwideChildrens.org/MHHD25. Follow the instructions on the website. **ACT and SAT scores are from the December test dates.**

Tips for Success—*When you apply online:*

Write down your log in information in case you need to go back into your application.

1. Log on
2. Look at the essay prompts
3. Finish essay in a separate document
4. Attach online
5. Finish the entire online application at one time
6. You MUST enter the name and email for your reference. They will get instructions on how to upload your reference into the system. You will not see this.
7. Click SUBMIT. If there are no errors, you will receive a message that it is complete.

You must submit in PDF format. Nothing else will be accepted or reviewed.

- **To apply by mail,** complete the application. Email, fax or land mail the completed application, including essays and reference, to CommunityEducation@NationwideChildrens.org, fax (614) 355-0670 or Community Education, Nationwide Children's Hospital, 700 Children's Drive, Columbus, OH 43205. Mail must be postmarked no later than February 12, 2027 at 8 a.m.
- **Late or partial applications will NOT be accepted. No exceptions. Essays that do not answer the questions will not be reviewed and applications will not be ranked.**

Selection Process

Students are selected by a panel of researchers, physicians and administrators at Nationwide Children's Hospital and former MHHD students. **Applications are evaluated through a blind review process.**

Summer Scientist Education Series

As part of the MHHD experience, students must attend this lecture series held on Thursdays at 4 p.m. for further exposure to research, medicine and careers. Log onto NationwideChildrens.org/Summer-Scientist-Series to review former lectures on-demand.