



HudsonAlpha Biotech Academy

Frequently Asked Questions About the HudsonAlpha Biotech Academy

1. What is the Biotech Academy?

The HudsonAlpha Biotech Academy is a four-week summer experience for rising high school juniors and seniors. This laboratory-intensive experience focuses on many procedures used in the genomics and biotechnology fields, including:

- Molecular biology techniques
- DNA sequencing
- Bioinformatics resources that explore DNA
- Synthetic biology and genetically-engineered bacteria

Students in the Biotech Academy work in small project-based teams. The skills taught during the program provide an excellent overview of the growing field of biotechnology and its applications for industry, agriculture, and healthcare. For students considering careers in biotechnology and genetics, the Academy is a fantastic opportunity to explore cutting-edge approaches to life science research. In addition to hands-on lab work, participants will tour the HudsonAlpha Institute and associated companies and visit with many scientists. At the same time, they get to explore the research being conducted there and the many career options available to them.

2. When and where will the Biotech Academy be held?

The Academy be held for four weeks during the summer, Monday-Friday afternoons from 1-5 pm, and will include a mix of large group discussion, small group work, and hands-on time in the laboratory. Please refer to the website for this year's specific dates.

The Academy will be in the Paul Propst Center on the HudsonAlpha campus in Huntsville's Cumming's Research Park. The Propst Center is located at 800 Hudson Way NW, Huntsville, AL 35806. It is the student's responsibility to arrange transportation to and from HudsonAlpha each day.

3. How are Biotech Academy students chosen for participation?

One student from each public school in Madison County, Madison City, and Huntsville City and several private schools will be invited to attend the Biotech Academy each summer. The Life Science teachers at each school will select the successful nominee. The teachers are encouraged to choose a student who has a passion for science and learning and will benefit from this unique opportunity to explore the fields of genetics and genomics at HudsonAlpha.



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4. From which schools are Biotech Academy participants selected?

One participant will be selected from each of the following high schools:

Alabama School of Cyber Technology and Engineering Bob Jones High School Buckhorn High School Columbia High School Grissom High School Hazel Green High School Huntsville High School James Clemens High School Jemison High School Lee High School	Madison Academy Madison County High School New Century Technology High School New Hope High School Providence Classical School Randolph School Sparkman High School St. John Paul II Catholic High School Westminster Christian Academy Whitesburg Christian Academy
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5. I'm a student interested in attending the Biotech Academy – what should I do?

If you attend an eligible school and will have completed the 10th grade before the summer session, talk with the Life Science teachers at your high school and tell them why you think you would be an excellent choice to represent your school at the HudsonAlpha Biotech Academy. Interest and enthusiasm are the most important qualities of a Biotech Academy participant.

6. What if I will have to miss a portion of the Academy – am I still eligible?

The Academy covers various topics and skills and builds on lessons and concepts learned daily. The instructors cannot catch students up on missed content, instruct the other students, and conduct the activities for that day. *As a result, our policy is that students must attend all sessions and not plan vacations, appointments, other programs, work, or otherwise be absent during this time frame.*

7. Who leads the Biotech Academy?

Dr. Nikki Mertz, an experienced HudsonAlpha Educational Outreach team member, will lead the Academy. Throughout the experience, students will interact with other members of the Educational Outreach team, as well as scientists and entrepreneurs from across HudsonAlpha's research laboratories and associated companies.

8. Is previous experience required?

Students need to have completed the 10th grade and successfully passed biology. No previous laboratory experience is required, but students must be willing to think scientifically, work collaboratively, receive and follow directions, maintain detailed laboratory notebooks and act professionally and respectfully at all times.

9. Is there a cost associated with participation?

Several resources and laboratory materials will be used throughout the eighty-hour Academy experience. These associated costs total \$1,500 per student. However, thanks to a generous private donation, each student's tuition has been completely covered, meaning there are no costs to attending the Academy.



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10. What are some of the specific topics that will be covered?

- Microbiology techniques
- Genetic engineering
- DNA extraction and amplification
- Nucleic acid visualization
- DNA Sequencing
- Bioinformatics
- Synthetic biology
- Restriction enzyme digestion and analysis
- Protein purification
- RNA interference

Can't seem to find what you need? Give us a call at (256) 327-0510 or send an email to: edoutreach@hudsonalpha.org.