

Our Ultimate Educational Experience

Get a taste of space exploration with Space Center U®, our ultimate educational experience! Space Center Houston offers Space Center University, a challenging, five- or three-day immersive experience that allows one to live the dream of space exploration. Space Center U promotes teamwork, communications, solving problems, adapting to unexpected situations, interactive activities and space-science challenges.

What we offer

Space Center U offers courses for different groups, including five-day programs for students ages 15-18 and 11-14, and three-day courses for educators and people with visual impairments. Learn more at spacecenteruniversity.org.

Who we are

Space Center Houston is a leading science and space exploration learning center, the Official Visitor Center for NASA Johnson Space Center and a gateway for space exploration, science and engineering innovation. Visit spacecenter.org



Variety of activities

Participants are inspired as they go behind the scenes to see “the real thing” at NASA Johnson Space Center and tour the Neutral Buoyancy Laboratory, the world’s largest underwater training facility. Other activities include:

- Cognitive and tactile tasks to simulate astronaut training and the engineering design process
- Hands-on, engineering-based activities
- Interactive, project-based learning that includes sustainable habitat construction, strategic scientific planning and investigations, collaborative teaming and global awareness development
- Engaging topics include robotics, cryogenics, thermodynamics, rocketry, scuba simulations and Mars and lunar habitat design
- Daily lunch served at Space Center Houston.
- Brunch with an Astronaut
- Graduation ceremony and certificates

General information

- Groups must have a minimum of 10 and a maximum of 70 students. A minimum of 1:10 chaperones-to-student ratio is required.
- Individuals may register online for up to three students and chaperones.
- Participants are responsible for transportation from any airport to the hotel, as well as to and from the hotel to Space Center Houston, the Neutral Buoyancy Laboratory and the scuba dive session.
- Pricing starts as low as \$525.95 per person, but varies based on group size and travel needs. Learn more at spacecenteruniversity.org.

Contact us!

For more information or to register, contact Reservations at +1 281-283-4755 or reservations@spacecenter.org; or visit spacecenteruniversity.org.

Ages 11-14 program activities

Space exploration ... Getting there

- **Lunar launch:** Participants will engineer, build and launch a one-stage rocket. Students will perform stability tests to ensure rockets are flight-ready and work through calculations to determine apogee, or maximum altitude. Launch site may vary due to weather.
- **Science modules:** Space exploration involves physics, chemistry, biology and many more fields of science. The science modules allow students to accomplish smaller tasks related to revealing the unknowns of space. Participants work in teams to solve these mysteries and receive bonuses to use in engineering challenges.
- **Team building:** A critical aspect of being an astronaut is being able to work with teammates to ensure a successful mission. Students will be engaged in daily team-building activities to learn to listen, communicate, collaborate and solve problems.



Astronauts and engineers ... living there

- **Lunar living:** What is it like living in space? How do astronauts get enough clean water and air? How do astronauts communicate and work with people from different cultures? Students will participate in simulated scenarios and build their own functioning lunar habitats that sustain core areas of life while maintaining cultural and global awareness.
- **Roving robotics:** Participants will explore and accomplish tasks in space using a robotic rover based on a given set of parameters. Students will learn math calculations needed to traverse the space field and to use sensors to improve accuracy. They also will translate mathematic calculations into coding instructions for their robots to ensure mission success!
- **Bring the heat!:** Getting back to Earth is no easy task. Heat shields must withstand temperatures of over 1000 degrees Fahrenheit (537 degrees Celsius) during re-entry into Earth's atmosphere. Students will design, build, test, re-design and re-test heat shields to ensure astronaut safety during re-entry.

It's not rocket science ... oh, wait, yes it is!

- **NASA behind-the-scenes tours:** Students will tour NASA Johnson Space Center with stops at the Apollo

era Historic Mission Control, Neutral Buoyancy Laboratory and the Space Vehicle Mock-up Facility, including its full-size training modules of the International Space Station. See rockets up-close that were used in early space exploration.

Ages 15-18 and adult program activities

Space exploration ... getting there

- **Mars or bust:** Participants will engineer, build and launch a rocket of their design. Launch site may vary due to weather.



- **Bring the heat:** Students will design, construct and test a thermal heat shield to be able to withstand temperatures up to 1,000° Fahrenheit (538° Celsius). This exercise simulates the effect of friction on a heat shield during entry into the Martian atmosphere.
- **Cryogenics testing:** Can you protect your astronaut from the cold conditions on Mars? Design and build a cryo-capsule to protect your astronauts from extreme temperatures of -321° Fahrenheit (-196° Celsius)

Astronauts and engineers ... living there

- **Working in weightlessness:** Working with licensed dive instructors in a local indoor swimming pool, participants will learn techniques taught to astronauts in preparation to perform tasks in microgravity. Next, students will build a mock-up airlock and perform other essential tasks similar to those developed by NASA.
- **Roving robotics:** In a robotics challenge, students must apply computer science skills to program their rover based on a given set of parameters that the rover must accomplish on Mars. In the second robotics challenge, students must manage their project budget, supply price list and real-world criteria to design and construct rover, which will be tested collecting rock samples and returning to base in the Space Center Houston Mars Yard.
- **Living on Mars:** What's it like living in space? How do astronauts get enough clean water and air? What happens if something goes wrong? How do astronauts communicate and work with people from different cultures? Students will participate in simulated scenarios, build their own functioning habitat that sustains core areas of life while maintaining cultural and global awareness.

It's not Rocket Science ... oh, wait, yes it is!

- **NASA behind-the-scenes tours:** Students will tour NASA Johnson Space Center with stops at the Apollo era Historic Mission Control, Neutral Buoyancy Laboratory and the Space Vehicle Mock-up Facility, including its full-size training modules of the International Space Station. See rockets up-close that were used in early space exploration.

Activities are subject to change without notice due to weather or unforeseen circumstances.



Class size

- Groups must have a minimum of 10 and a maximum of 70 students.
- Larger groups are considered on a case-by-case basis.
- A minimum of 1:10 chaperons to student ratio is required for the program.

Transportation

Transportation from any airport to the hotel is the responsibility of the participant, as well as transportation to and from the hotel to Space Center Houston, the Neutral Buoyancy Laboratory and the scuba dive session. **The scuba dive is an activity for the high school program only.*

Packages and pricing

Ages 11-14 Program

Individuals and groups with 2-9 students

Package 1 \$615.95 per person

Lodging is the responsibility of the participant.

Groups with 10-19 students

Package 2 no hotel \$615.95 per person

Package 3 with hotel \$950.95 per person

Groups with 20 students or more

Package 4 no hotel \$525.95 per person

Package 5 with hotel \$885.95 per person

Ages 15-18 Program

Individuals and groups with 2-9 students

Package 1 \$674.95 per person

Lodging is the responsibility of the individual.

Groups with 10-19 students

Package 2 no hotel \$674.95 per person

Package 3 with hotel \$1,045.95 per person

Groups with 20 students or more

Package 4 no hotel \$579.95 per person

Package 5 with hotel \$975.95 per person

All packages include admission, supplies, staff, lunch and graduation. Hotel packages include all of the above as well as 6-night hotel accommodations (*double occupancy*).

Program fees and options

Group registration / administration fee

\$300

Additional night hotel fee (per night, per room)

\$125

Graduation ceremony / Brunch with an Astronaut

\$69.95

(Per person for parents and non-program participants)

