A background image of space featuring the Earth's horizon and a bright sun or starburst in the center, creating a lens flare effect. The text is overlaid on this background.

# **DEGREES IN SPACE ARCHITECTURE & AEROSPACE ENGINEERING**

**REACH FOR THE STARS**

UNIVERSITY of **HOUSTON** | ENGINEERING

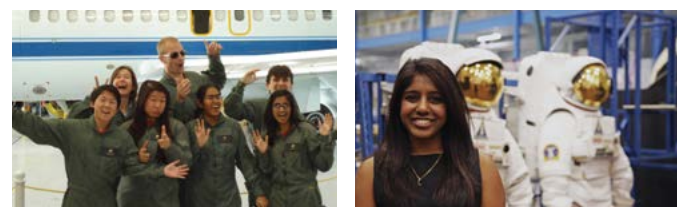
# AEROSPACE ENGINEERING

## WHAT IS AEROSPACE ENGINEERING?

Aerospace engineers invent, design and build the technologies, processes and prototypes required for aviation. These include aircrafts, spacecraft, satellites, missiles, power and energy systems, as well as electronic systems and software for airplanes and spacecraft.

## WHY THE UNIVERSITY OF HOUSTON?

Students in the interdisciplinary aerospace engineering program are trained to understand full systems involved in aerospace engineering, from aerodynamics and materials to space physics and human factors. The city of Houston, also known as Space City, is recognized internationally for the strength of its aerospace companies and its proximity to the NASA Johnson Space Center (JSC). Aerospace engineering students often work full-time, part-time or internship-based positions at NASA JSC and other aerospace companies while pursuing their degree at UH. Graduates of the program exceed the expectations of employers in the aerospace industry and can be found in leadership positions throughout the Houston region and beyond.



## WHAT CAN I DO WITH AN AEROSPACE ENGINEERING GRADUATE DEGREE?

**Smart Materials:** Explore new smart materials for building aircrafts and spacecraft.

**Advanced Propulsion:** Design more environmentally friendly hybrid jet-fuel electric systems for launching aircrafts and spacecraft.

**Commercial Space Industry:** Lead the race to space by working with private aerospace companies who are developing new spacecraft, vehicles and systems for human space flight, space tourism and research.

**Unmanned Aerial Vehicles (UAVs):** Work at the cutting-edge of aviation and fly an aircraft without leaving your desk! Help develop UAVs for scientific research, national security, weather monitoring and much more.

A 2017 salary survey produced by the National Association of Colleges and Employers (NACE) found that new graduates with an M.S. in aerospace engineering earn an average starting salary of \$72,804.

## WHAT TYPES OF GRADUATE DEGREES DO YOU OFFER IN AEROSPACE ENGINEERING?

The UH Cullen College of Engineering offers M.S. thesis and non-thesis degrees in aerospace engineering.

### FOR MORE INFORMATION

For more information on eligibility and admissions requirements, please visit [aerospace.egr.uh.edu/graduate-program/program-description](https://aerospace.egr.uh.edu/graduate-program/program-description)

# SPACE ARCHITECTURE

## WHAT IS SPACE ARCHITECTURE?

Space architecture is an interdisciplinary field that involves the planning and design of facilities in extreme environments on earth and in space, including ocean facilities, polar research stations, human disaster accommodations and orbiting space stations. The only program of its kind in the world, the Cullen College's space architecture program involves engineers and technical architects teaming up to design missions and operations from the ground up. Their work includes orbital mechanics, human habitats, logistics, design for extreme environments, life support systems, human factors and launch capability trades.

## WHY THE UNIVERSITY OF HOUSTON?

The UH Cullen College of Engineering is the home of the world's only graduate program in space architecture. The operational center for the program is the Sasakawa International Center for Space Architecture, or SICSA, which is internationally-recognized as the center that both defines and leads the space architecture field. SICSA's location in Houston, a preeminent global space technology and trade center, affords important resource and collaboration benefits. This setting offers convenient access to NASA's Johnson Space Center, local aerospace companies, major research institutions and commercial technology enterprises throughout the city and region.

### FOR MORE INFORMATION

For more information on eligibility and admissions requirements, please visit [sicsa.egr.uh.edu/welcome/ms-space-architecture-curriculum](https://sicsa.egr.uh.edu/welcome/ms-space-architecture-curriculum)

## DUAL M.S. DEGREE IN AEROSPACE ENGINEERING AND SPACE ARCHITECTURE

Graduate students interested in the related fields of Aerospace Engineering and Space Architecture can combine their studies in a Dual Aerospace Engineering/Space Architecture Master of Science degree program. The dual degree allows students to obtain a M.S. degree in Aerospace Engineering and a M.S. degree in Space Architecture by completing 46 credit hours of relevant graduate coursework. Hence, with the appropriate selection of graduate courses within the Aerospace Engineering and the Space Architecture programs students can be awarded both degrees. Hence, the dual degree plan significantly reduces the total number of credit hours needed if the two degrees were pursued separately.

## WHAT CAN I DO WITH A SPACE ARCHITECTURE GRADUATE DEGREE?

Career opportunities for space architecture graduates are excellent – especially in the city of Houston, also known as Space City. Graduates of the space architecture program can be found in leadership positions at NASA, ESA and commercial space industry as well as in energy companies throughout the Houston region and beyond.

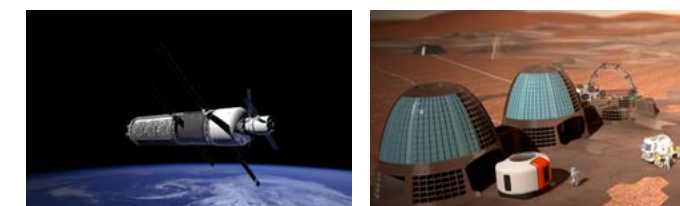
**Man Systems Integration:** Attain a good understanding of space structures and systems through design, research, and analysis.

**Spacecraft and Habitat Design:** Learn about human factors, ergonomics, extreme environments constraints and psycho-social factors design requirements.

**Mission Planning and Analysis:** Plan manned space missions to Moon, Mars and deep space optimizing human safety, performance and comfort, and satisfying engineering systems requirements.

## WHAT TYPES OF GRADUATE DEGREES DO YOU OFFER IN SPACE ARCHITECTURE?

The UH Cullen College of Engineering offers an M.S. degree (thesis) in space architecture.



### FOR MORE INFORMATION

For more information on eligibility and admissions requirements, please visit [aerospace.egr.uh.edu/graduate-program/program-description](https://aerospace.egr.uh.edu/graduate-program/program-description)

## FAST FACTS

- ▶ 1,266 TOTAL GRADUATE STUDENTS IN CULLEN COLLEGE
- ▶ TOTAL GRADUATE STUDENTS IN AEROSPACE DEPARTMENT - 13 M.S. STUDENTS
- ▶ TOTAL GRADUATE STUDENTS IN SPACE ARCHITECTURE DEPARTMENT - 16 M.S. STUDENTS
- ▶ 138 TOTAL FACULTY IN COLLEGE
- ▶ \$26M IN RESEARCH EXPENDITURES
- ▶ \$72,804 AVERAGE STARTING SALARY M.S. IN AEROSPACE

# UNIVERSITY of HOUSTON | ENGINEERING

## **Cullen College of Engineering**

Admissions Questions—Contact Graduate Advisor Cecily Smith:

713-743-4505 | [megrad@uh.edu](mailto:megrad@uh.edu)

Space Architecture Questions—Contact Olga Bannova

[obannova@uh.edu](mailto:obannova@uh.edu)

[aerospace.egr.uh.edu](http://aerospace.egr.uh.edu)

[sicsa.egr.uh.edu](http://sicsa.egr.uh.edu)



[@UHEngineering](https://twitter.com/UHEngineering)