**MASTER OF SCIENCE IN** 

# **SPACE ARCHITECTURE**

# □ SICSA.EGR.UH.EDU

# PUSHING "HOME" BEYOND ITS EARTHLY LIMITS

#### **ABOUT THE PROGRAM**

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 one 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.







Cullen College of Engineering UNIVERSITY OF HOUSTON



#### 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.

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, Boeing and SpaceX as well as in energy companies throughout the Houston region and beyond.

#### **RESEARCH ENTERPRISE**

We are academic leaders in the field of space architecture and are also active in the planning and designing of facilities for extreme environments on Earth. These include ocean facilities, polar research stations and human disaster accommodations. Graduates will also conduct trade studies and learn about operational factors which contribute to the design of these spaces, such as logistics, orbital mechanics, transportation cost trades, etc. Our collaborators have included NASA, The Boeing Company, Oceaneering, and the Houston Airport System/Houston Spaceport.

Research focus areas include human systems integration, mission planning and design, and spacecraft and space habitats. To learn more about research opportunities please visit: **sicsa.egr.uh.edu/research** 



## **FACILITIES & LABORATORIES**

Housed in the Gerald D. Hines College of Architecture and Design, space architecture facilities are an exceptional springboard for the creative design of livable communities in space.

#### **CENTERS & CONSORTIA**

By its nature, space research is collaborative across academic programs and research. Faculty in space architecture continue to build relationships and join consortia involved in space.

SICSA routinely partners with industry, and research and teaching organizations in areas that include development of shared educational materials, faculty and staff exchange programs, research proposals, and joint sponsorships of workshops and conferences.

Some of SICSA's international partners include the department of Industrial Architecture at the Lund Institute of Technology (Lund), Department of Architecture at Chalmers University of Technology (Gothenburg), Sweden, Moscow Aviation Institute-State University of Aerospace Technologies (MAI), and Bauman Moscow State Technical University (MSTU), Russia.

To learn more, please visit: sicsa.egr.uh.edu/research/centers-consortia

#### 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, as well as a dual M.S. degree in aerospace engineering and space architecture.

SICSA offers two types of MS-Space Architecture curriculum, one for full-time students (3 semesters) and another for part-time local industry employees (5 semesters). One of the signature courses includes a group 2 semester "studio" in which students work as a team on a real design.



## FOR MORE INFORMATION

For more information on eligibility and admissions requirements, please visit <u>sicsa.egr.uh.edu/</u><u>welcome/ms-space-architecture-curriculum</u>