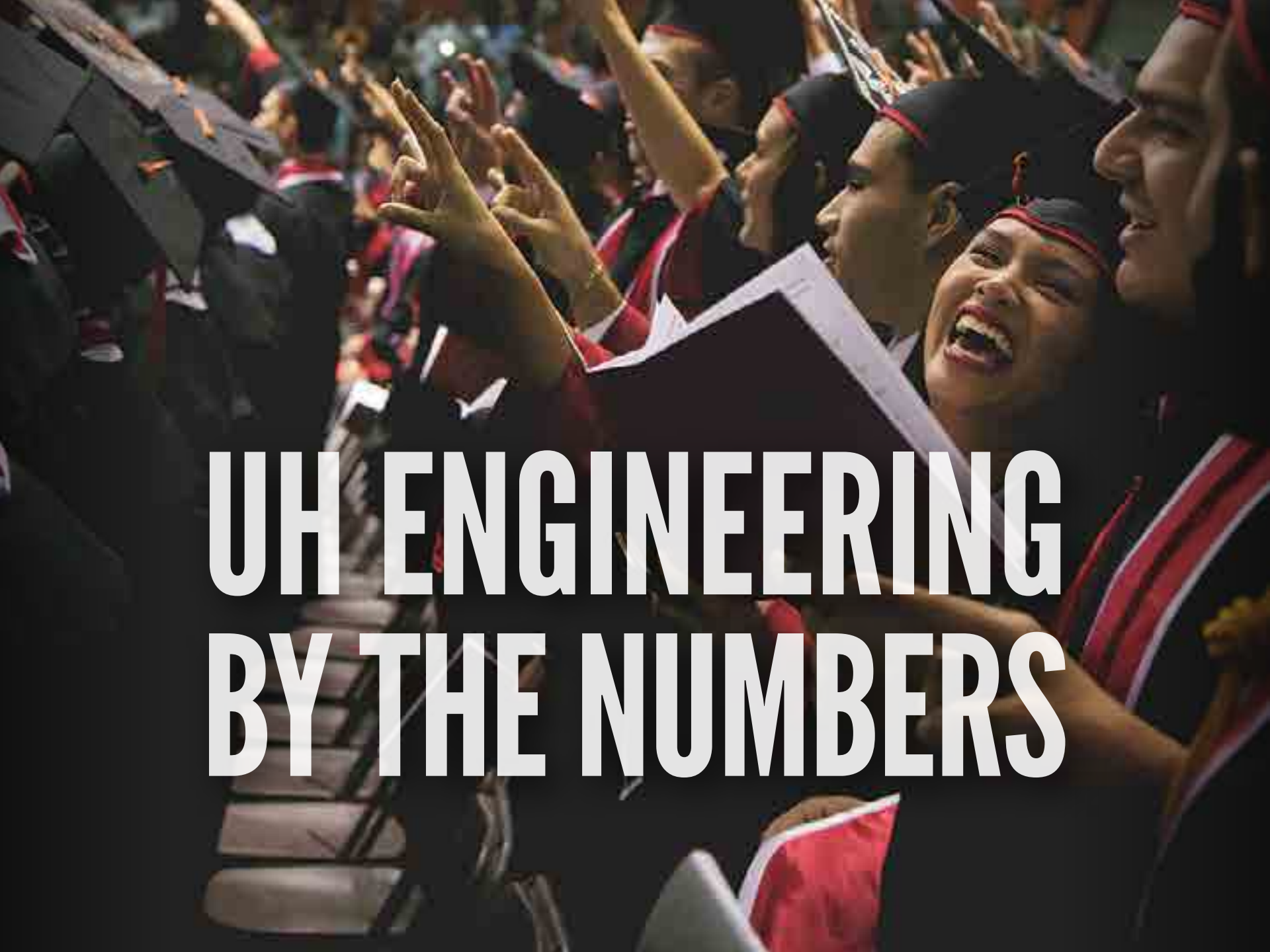




ENGINEERING HOUSTON, ENGINEERING THE WORLD



CULLEN
COLLEGE OF ENGINEERING
UNIVERSITY of HOUSTON



UH ENGINEERING BY THE NUMBERS

UH ENGINEERING BY THE NUMBERS



NAMED BEST ENGINEERING SCHOOL OF 2019 (#69)

**(Source: U.S. News & World Report)*

TOP 100*

ENGINEERING PROGRAMS IN THE U.S.

**(Source: U.S. News & World Report)*

UH ENGINEERING BY THE NUMBERS



1,287 graduate students + **3,267** undergraduate students

.....

1340 AVG SAT SCORE

of entering freshmen

UH ENGINEERING BY THE NUMBERS

139

total faculty

14



National Academy of Engineering Faculty Members

55

research labs, centers,
institutes and industry
consortiums

\$26M+

in research
expenditures

30+

active laboratories

UH ENGINEERING BY THE NUMBERS

.....

\$104,640 average annual salary for engineers in Houston, Texas*

.....

25% of engineers in the Houston metro area earn

25% higher annual salaries than the national average*

.....

87,500 jobs in engineering and architecture in the Houston metro area in 2016*

.....

80% of UH engineering undergraduates are employed in Texas within one year of graduation

.....

19,000+ total alumni of the Cullen College of Engineering

**Source: U.S. Bureau of Labor Statistics, May 2016*



UH ENGINEERING BY THE NUMBERS

LOCATED IN THE ENERGY CAPITAL OF THE WORLD, UH ENGINEERING IS JUST A 10-MINUTE DRIVE FROM:



The **TEXAS MEDICAL CENTER**,
the largest medical complex in the world



The **HOUSTON MUSEUM DISTRICT**,
one of the nation's largest museum districts



The **HOUSTON THEATER DISTRICT**,
a 17-block area in downtown Houston filled
with magnificent performing arts theaters,
including the Houston Grand Opera,
the Houston Symphony Orchestra, the
Houston Ballet and the Alley Theatre



ALL 24 OF THE FORTUNE 500 COMPANIES HEADQUARTERED IN THE BAYOU CITY



A photograph of two men sitting on the floor, smiling and holding a small, white and red humanoid robot. The man on the left is wearing a black shirt and glasses, while the man on the right is wearing a red polo shirt. The robot has a white body with red accents and a red visor. The background is a simple indoor setting with a yellow wall and a doorway.

ABOUT UH ENGINEERING

7

DEPARTMENTS

**Biomedical // Chemical & Biomolecular // Civil & Environmental
Electrical & Computer // Industrial // Mechanical // Petroleum**

ABOUT UH ENGINEERING

EXPANDING PROGRAMS

SUBSEA

GEOSENSING SYSTEMS ENGINEERING AND SCIENCES

SPACE ARCHITECTURE

ABOUT UH ENGINEERING

CORE RESEARCH THRUST AREAS

ENERGY

BIOMEDICAL ENGINEERING

MATERIALS

SUSTAINABILITY

COMPLEX SYSTEMS

ABOUT UH ENGINEERING

TOP-RANKED GRADUATE PROGRAMS



Graduate programs in civil, mechanical, computer, electrical and chemical earned the status of Best Engineering Programs of 2019 by U.S. NEWS & WORLD REPORT

#13 Best Petroleum Engineering Program



#34 Best Chemical Engineering Program



#47 Best Industrial Engineering Program



#54 Best Aerospace Engineering Program



#59 Best Electrical Engineering Program

#62 Best Civil Engineering Program



#63 Best Environmental Engineering Program



#75 Best Mechanical Engineering Program



#77 Best Materials Engineering Program



#78 Best Biomedical Engineering Program



RAPIDLY EXPANDING ONLINE GRADUATE PROGRAMS

Launched online master's programs in mechanical, civil, subsea, petroleum and industrial power systems engineering

Additional fully-online certificate program in subsea engineering and power and energy systems

Plans to launch several more fully-online programs in coming years



[Onlinelearning.egr.uh.edu](https://onlinelearning.egr.uh.edu)



ABOUT UH ENGINEERING



NEW BUILDINGS, **NEW** CAMPUSES

**Engineering building at the UH Katy Campus
scheduled to open in Fall 2019**

.....

Courses in subsea, petroleum, electrical, environmental and mechanical engineering currently offered at the Houston Community College-Katy Campus, with more course offerings coming during FY 2018-2019

ABOUT UH ENGINEERING



17

NSF CAREER
AWARDS

MEGAN ROBERTSON (ChBE)

Developing plastics from plants.

JIMING BAO (ECE)

Examining the optical properties of graphene, one-atom-thick sheets of carbon.

JACINTA CONRAD (ChBE)

Developing surfaces that limit bacteria motility.

JEFFREY RIMER (ChBE)

Improving zeolites, a class of catalysts used in the petroleum and chemical industries.

DEBORA RODRIGUES (CEE)

Studying the environmental impact of nano-scale materials that utilize graphene.

LARS GRABOW (ChBE)

Designing a novel chemical looping process for methane coupling using hydrogen storage materials.

WEI-CHUAN SHIH (ECE)

Developing a new method to rapidly identify and profile bacteria.

GILA STEIN (ChBE)

Characterizing and improve polymer-based solar cells.

HALEH ARDEBILI (ME)

Developing more effective stretchable, flexible batteries.

ZHU HAN (ECE)

Creating “cognitive radio networks” to identify quiet frequencies and utilize them for data transmission.

STANKO BRANKOVIC (ECE)

Investigating how the size of a material effects its behavior.

BORA GENCTURK (CEE)

Increasing resiliency and sustainability of reinforced concrete against aging and seismic hazards through novel materials.

CUNJIANG YU (ME)

Increasing resiliency and sustainability Developing 3D electronics manufacturing process.

AARON BECKER (ECE)

Manipulating large swarms of micro-robots to perform specific tasks.

ZHENG CHEN (ME)

Creating artificial muscle and tendons for dexterous, compliant and affordable prostheses that more closely mimic human muscles.

JEREMY PALMER (ChBE)

Controlling crystal nucleation in liquids to transform applications in pharmaceutical processing and materials design.

SHEEREEN MAJD (BME)

Tailoring nanoparticle drug carriers to improve drug delivery

UH ENGINEERING IN THE MEDIA

Professors and students at the UH Cullen College of Engineering are often featured in national and international media for their groundbreaking research.



UH ENGINEERING IN THE MEDIA



HOUSTONIA MAGAZINE HIGHLIGHTS UNIQUE UH RESEARCH CENTER

In an article titled “This UH Research Center is Revolutionizing Archaeology,” Houstonia magazine shines the spotlight on University of Houston’s National Center for Airborne Laser Mapping (NCALM) and its director, Ramesh Shrestha.

UH ENGINEERING IN THE MEDIA

NATURE MAGAZINE FEATURES UH PROFESSOR'S WORK TO ADDRESS PARALYSIS

Nature magazine published an article featuring Jose Contreras-Vidal, professor of electrical and computer engineering at the UH Cullen College of Engineering, in March about scientists developing technological solutions, such as neural prostheses or devices that read brain signals and help restore movement in paralyzed patients.



UH LAUNCHES INSTITUTE FOR DATA SCIENCE

- ▶ The University of Houston has launched a new Institute for Data Science, naming **Andrea Prosperetti**, Distinguished Professor of mechanical engineering at the Cullen College and a member of the National Academy of Engineering, to lead the venture
- ▶ The Institute's initial work will span four areas of application:
 - 1) Cyber and physical security
 - 2) Drug development and discovery
 - 3) Sustainable communities and infrastructure
 - 4) Accessible and personalized healthcare



ABOUT UH ENGINEERING

HURRI

Hurricane Resilience Research Institute

The new Hurricane Resilience Research Institute (HuRRI), a multi-institution research center led by UH Cullen College engineer Hanadi Rifai will focus on helping the Gulf coast do better at preparing for and mitigating the damage and loss of lives from hurricanes and other severe storms



A night-time outdoor student event, likely a fair or festival, taking place on a grassy area. The scene is illuminated by warm, yellow string lights hanging from trees. In the foreground, a young woman in a black and white striped jacket is eating from a red plate. To her left, a man with a large black and red backpack is walking. In the background, a crowd of students is gathered around a table with a white slow cooker and other food items. A red banner with the word "ATCHE" is visible in the background. The overall atmosphere is lively and social.

STUDENT LIFE

28 ENGINEERING STUDENT ORGANIZATIONS

.....

Society of Hispanic Professional Engineers (SHEP) at UH and **National Society of Black Engineers (NSBE)** at UH were both named **Number One in U.S.A** for their respective chapter divisions.



OUR “PROMES” TO YOU

The Program for Mastery in Engineering Studies, or **PROMES** (pronounced “promise”), is a student success program dedicated to providing the help and support needed to succeed in engineering.

PROMES provides engineering students with academic advising, workshops, scholarships, and professional and personal development opportunities. **PROMES** helps students keep up with classes, study for exams, discover where they best fit in the college community, and find balance between their personal and academic lives.

PROMES is open to all undergraduate students in the college and provides a positive learning environment that supports their needs.

BRAGGING POINTS

- ✓ **UH engineering students ranked 15th in the U.S.** for salary-earning potential (Source: PayScale.com)
- ✓ Named one of *Princeton Review's* **“Best Colleges Undergraduate Education”** and **“Nation’s Best Colleges”** (2016, 2014)
- ✓ Located in **“America’s Coolest City”** and **“One of the best places for 20-somethings”** (Source: *Forbes* and *CreditDonkey*, 2013)
- ✓ Listed as one of the world’s top universities **for grads who go on to become CEOs** (Source: *The Times Higher Education of London*)
- ✓ Ranked #4 in the nation for **“Top Colleges Where Students Get the Best Bang for Their Buck”** (Source: *PolicyMic*, 2013)
- ✓ Ranked among the top 75 in the nation and **#1 in Houston for engineering research** and development expenditures (Source: National Science Foundation, 2011)



DID YOU KNOW?

3,500+ UH alumni are presidents, CEOs, or heads of their own companies

.....

63% of all University of Houston alumni live and work in Houston

.....

UH students spend over **1 million** hours volunteering and interning in Houston each year

.....

14% of all Houstonians with bachelor's degrees received them from UH



STUDENT LIFE

ACADEMICS

UH Engineering offers undergraduate degrees in:

Biomedical Engineering

Chemical Engineering

Civil and Environmental Engineering

Electrical Engineering

Computer Engineering

Industrial Engineering

Mechanical Engineering

Petroleum Engineering

UH Engineering offers graduate degrees in:

Aerospace Engineering

Biomedical Engineering

Chemical Engineering

Civil Engineering

Environmental Engineering

Electrical Engineering

Computer and Systems Engineering

Geosensing Systems Engineering

Industrial Engineering

Materials Science and Engineering

Mechanical Engineering

Petroleum Engineering

Space Architecture

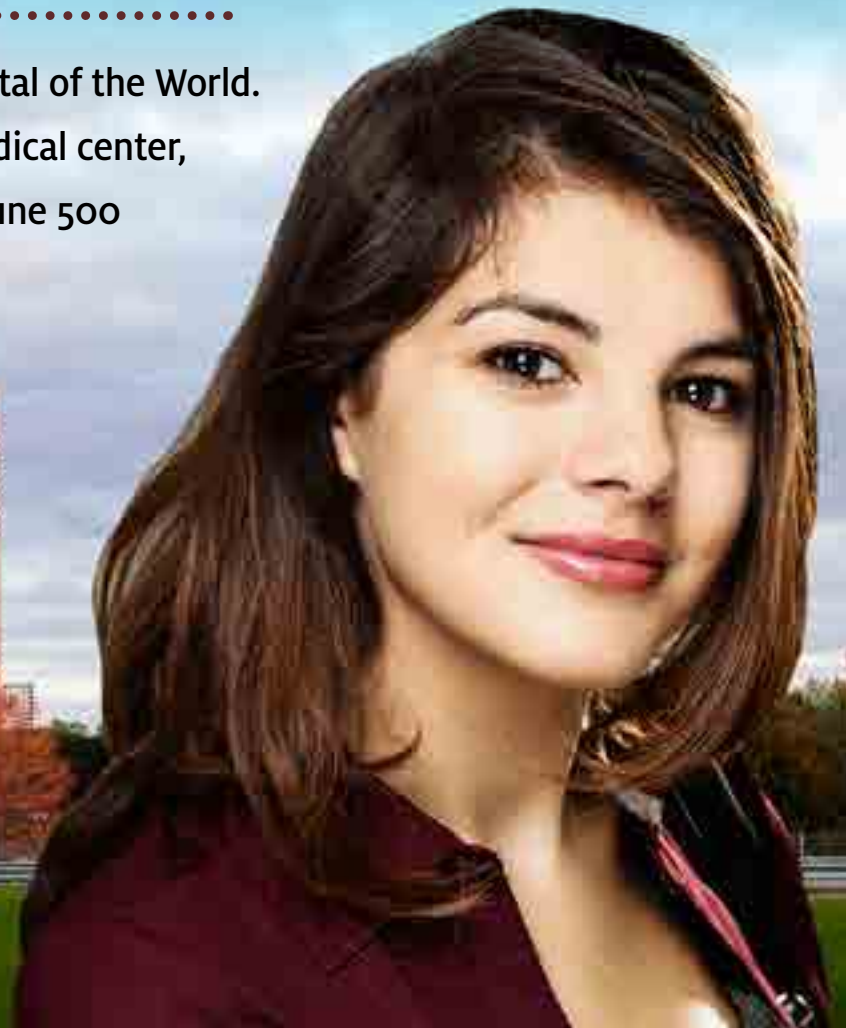
Subsea Engineering

RESEARCH

- Project-based learning is the rule at UH Engineering
- Students are exposed to hands-on, real-world training from the moment they step foot on campus on their first day of classes
- Students taught by world-renowned faculty members and industry leaders
- Countless research opportunities are available in the college's many research laboratories, centers and industry consortiums, as well as with individual faculty members
- All students are strongly encouraged to take on research opportunities through one of the college's many programs or with external internship opportunities

CAREERS

UH Engineering is centrally located in the Energy Capital of the World. The city of Houston is home to the world's largest medical center, NASA, the Port of Houston and the second-most Fortune 500 headquarters of all other major U.S. cities



CAREERS

The University of Houston's location in the heart of Houston makes maintaining jobs, internships or fellowships while pursuing an undergrad degree very doable

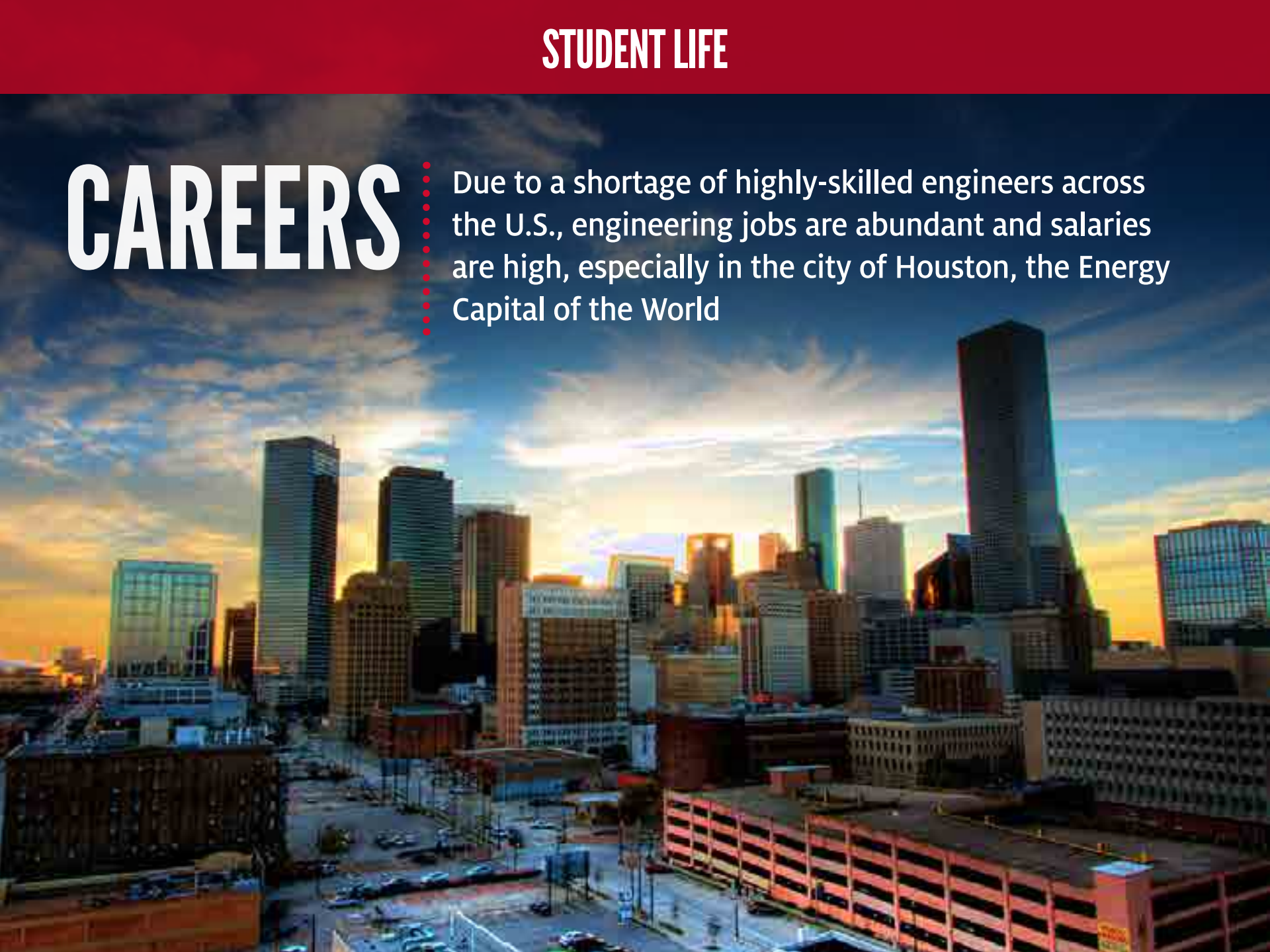


CAREERS

Engineering Career Center provides students with direct access to internships fellowships and full-time positions throughout the region

CAREERS

- Due to a shortage of highly-skilled engineers across the U.S., engineering jobs are abundant and salaries are high, especially in the city of Houston, the Energy Capital of the World



STUDENT LIFE

CAREERS

2018 Average Annual Salaries in Engineering

	Median entry-level salary ¹	Mean annual salary ²	Top 10% ³
AEROSPACE	\$72,175	\$115,300	\$162,110
BIOMEDICAL	\$62,170	\$92,970	\$142,610
CHEMICAL & BIOMOLECULAR	\$68,360	\$112,430	\$169,080
CIVIL	\$58,838	\$91,790	\$138,110
COMPUTER	\$72,629	\$119,650	\$176,900
ELECTRICAL	\$67,404	\$99,580	\$150,340

	Median entry-level salary ¹	Mean annual salary ²	Top 10% ³
ENVIRONMENTAL	\$58,512	\$91,180	\$134,060
INDUSTRIAL/ MANUFACTURING	\$62,063	\$90,340	\$130,930
MATERIALS	\$68,349	\$98,610	\$149,860
MECHANICAL	\$64,695	\$91,500	\$133,900
PETROLEUM	\$93,094	\$154,780	\$250,000
SUBSEA	\$93,829	\$106,347	\$300,000

¹ Figures from [payscale.com](https://www.payscale.com), October 2017

^{2,3} Figures from National Occupational Employment and Wage Estimates, U.S. Department of Labor, 2017

THANK YOU

UH Engineering is on the move.
Hop on for the ride.

CULLEN
COLLEGE OF ENGINEERING
UNIVERSITY of HOUSTON



@UHEngineering | University of Houston Cullen College of Engineering