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Minority Serving Institution Scholarship Program

**University of Houston-Downtown**

Scholars Academy

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Houston, Texas 77002

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# UHD

UNIVERSITY OF HOUSTON-DOWNTOWN

# Scholars Academy

An Academic Unit in the

COLLEGE OF SCIENCES AND TECHNOLOGY

# What is the Scholars Academy at UHD?

The UHD Scholars Academy is a competitive, comprehensive scholarship and mentoring program designed to support undergraduate success for students majoring in natural sciences (including pre-health related fields), mathematics, engineering, technology, and computer science.

## Academy Benefits:

- Over 17 years of developing and graduating professionals and leaders in STEM
- Small learning community promoting and supporting STEM majors' success
- Personal peer mentors and PhD faculty mentors providing guidance to all Academy members
- Access to free tutoring in lower and upper division courses in math, sciences, engineering
- Connection to career soft skills training & career broadening activities (field trips and seminars)
- Partnership with UHD Honors Program
- Support in entrance to university-level mentored research with PhD researcher
- Free GRE and other graduate entrance exam workshops, and travel support to national conferences
- Opportunities for external summer research, internships, and graduate programs
- Opportunities to receive additional funding through on-campus research, mentoring, tutoring, and workshop activities
- Bi-annual orientations and other special events for Academy members

## Eligibility Pathways:

### Automatic Entrance for Freshmen & Transfers through Merit Scholarship Awards:

#### First Time Freshmen & Transfers - Automatic Acceptance Pathway into Scholars Academy

- Be offered and accept a UHD Distinguished or Merit Scholarship (Renewable 2-4 years w/ minimum GPA of 3.5). Requires UHD Admissions application completed by Dec. 1.
- Be offered and accept a UHD Non-Renewable Scholarship (1 year w/ minimum GPA of 3.5)
- Be enrolled as a UHD full-time university student and a member of the Scholars Academy (12-15 credit hours minimum)
- Complete an SA E-Application (see link below)

### Entrance for High Performing Freshmen:

#### Current High School Seniors:

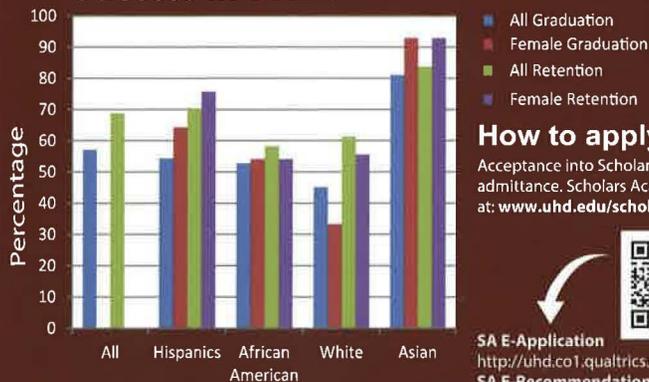
- Minimum unweighted overall 3.0 GPA (on a 4.0 scale);
- Minimum SAT score of 1,000 (500 each on mathematics and critical reading sections); or equivalency on other standardized exams
- Credit for at least pre-calculus in high school (minimal math level preferred)
- Complete an SA E-Application (see link below)

### Entrance for [Non-Merit] Transfers or Current UHD students:

- Minimum 3.0 cumulative GPA (on a 4.0 scale) in college within last 4-5 years
- Be enrolled as a full-time student (12-15 credit hours minimum)
- Complete an SA E-Application (see link below)



## Success In STEM



## How to apply?

Acceptance into Scholars Academy is dependent upon UHD admittance. Scholars Academy application is online at: [www.uhd.edu/scholars](http://www.uhd.edu/scholars)



### SA E-Application

[http://uhd.co1.qualtrics.com/SE/?SID=SV\\_bf1IF5v4XI0mEt](http://uhd.co1.qualtrics.com/SE/?SID=SV_bf1IF5v4XI0mEt)

### SA E-Recommendation Form

[http://uhd.co1.qualtrics.com/SE/?SID=SV\\_dg4xOVeE4X2vazr](http://uhd.co1.qualtrics.com/SE/?SID=SV_dg4xOVeE4X2vazr)

# Quick Facts...

**In 2016, over \$1.2 million was awarded to Scholars Academy students!**

## Scholars Academy Demographics

### ETHNICITY

Hispanic	46.5%
White/Caucasian	10%
African-American	15%
Asian/Other	28.5%

### GENDER

Male	49%
Female	51%

## Scholars Academy STEM Conference Research Presentations

Arizona	Mexico
California	Michigan
Canada	Missouri
Colorado	Nevada
Florida	New York
Georgia	Texas
Illinois	Utah
Louisiana	Washington
Maryland	Washington, DC

## SA Graduation Rates

FTIC (1999-2016)

**65%**

All Graduation Rate

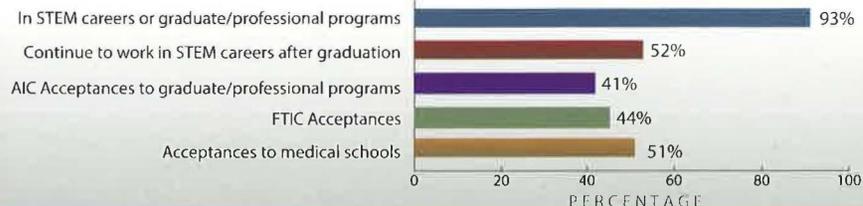
**74.2%**

## SA Retention Rates

FTIC (1998-2016)

**91%**

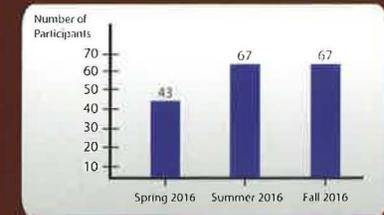
## SA Graduate Successes



## Recent Graduate & Professional Schools Accepting Scholars Academy Students:

Baylor College of Medicine  
Columbia University  
Harvard University  
Johns Hopkins University  
Penn State University  
Rice University  
Sam Houston State University  
Texas A & M University  
Texas Tech University  
University of Houston  
UT Medical Branch - Galveston  
UT Health Science Center - Houston  
UT Health Science Center - San Antonio  
UT Southwestern - Dallas

## Mentoring Research Data



This chart demonstrates the number of undergraduates participating in PhD mentored research at UHD or other research sites.

For more information, contact us at:  
[Scholars@uhd.edu](mailto:Scholars@uhd.edu), [ParkerM@uhd.edu](mailto:ParkerM@uhd.edu)  
[WilsonS@uhd.edu](mailto:WilsonS@uhd.edu)



Scholars Academy has awarded over 1,100 students with over \$7,000,000 in scholarships.

## College of Sciences and Technology

The College of Sciences and Technology prepares students for careers of post-graduate study and research in the sciences, technology, mathematics and computer science. The college responds and works with government and industry through cooperative research programs and grants which enhance the educational environment and experiences of our majors.

### MATHEMATICS & STATISTICS

The UHD Department of Mathematics and Statistics (MS) strives to provide a learning environment, where mathematics, and statistics problem-solving challenges provide a curriculum encouraging new learning daily. MS prepares graduates for the dynamics of the current and future workplace.



#### Degrees of Bachelor of Sciences in:

##### Mathematics

Prepare the student to develop and use analytical skills, to master mathematical techniques, required in related fields of application, and to enter the employment market with relevant and proficient mathematical tools. Career examples include industrial mathematics, applied statistics, actuarial mathematics, computer analysis, programming for various types of applications, the pursuit of graduate work in the mathematical field.

##### Applied Statistics

Provide students with the foundation of a liberal arts education and a broad overview of modern mathematics and its applications, while also emphasizing the power, depth, and beauty inherent in the subject.

##### **Concentration in Biostatistics**

This degree program is specifically designed for students who intend to be employed in life and health sciences requiring statistical tools. It provide students with a broad overview of statistics and its applications in biological sciences. Pre-med students having completed this concentration can fulfill TMDSAS course requirement.

##### **Major Secondary Mathematics Teacher Certification**

This degree plan is specifically designed for students who intend to teach high school mathematics. The degree is designed to allow students to be employed in areas requiring tools of statistics and applied mathematics related to data-based decision-making processes.

##### Bachelor of Arts in Mathematics

This degree is especially suitable for students who wish to enter a professional field such as secondary teacher certification, while acquiring a strong background in mathematics.

##### Minors

Statistics and Mathematics

##### Scholarships:

##### **Noyce Math Teacher Scholarship**

The UHD Noyce Mathematics Teacher Scholarship program provides \$12,000 annually in scholarships to UHD students who are majoring in mathematics while concurrently earning a secondary mathematics teacher certification in the Urban Education department.

### NATURAL SCIENCES

The mission of the UHD Department of Natural Sciences is to offer high-quality instruction in the natural sciences, prepare students for careers in science-related fields and graduate studies, improve science education at the pre-college level, and engage in educational activities that foster greater appreciation and understanding of science in the Greater Houston community and globally.

#### Degrees of Bachelor of Sciences in:

##### Biology

Prepares students interested in the following areas: dentistry; medicine and related fields that require post-graduate study; public health; graduate work in biological or biomedical sciences, and science education. Students have the option to choose a concentration.

##### **Concentration in Microbiology**

Curriculum emphasizes study of microbes and viruses.

##### **Concentration in Environmental Biosciences**

Curriculum emphasizes study of ecology and human impact on biological environments.

##### **Concentration in Molecular and Cellular Biosciences**

Curriculum emphasizes study of cells, organs, organisms using tools of modern biology.

##### Biological & Physical Sciences

For students interested in: environmental science; environmental, medical or patent law; and geosciences.

##### **Secondary-level Teacher Certification**

Allow the student to focus on earning teacher certification credits as part of their baccalaureate science program.

##### Biotechnology

Provide both entry-level job skills in biotechnology and strong academic background needed to pursue a masters or doctorate degree in Biotechnology, Biochemistry, Microbiology or Molecular Biology.

##### Chemistry

Prepare students to enter a highly technical and demanding field, as well as additional studies at the graduate level. (ACS accredited program)

##### **Concentration in Biochemistry**

Curriculum emphasizes the chemistry of life. Suitable for students interested in dentistry, medicine, and related fields that require graduate study.

##### **Concentration in Environmental Chemistry**

Curriculum emphasizes the chemistry of human activity on the environment. Suitable for students interested in jobs in the petrochemical industry, state regulatory agencies involved in environmental monitoring, and graduate study.

##### **Concentration in Forensic Sciences**

Curriculum emphasizes the chemistry and procedures of forensics. Suitable for students interested in working in criminal justice laboratories

##### **Concentration in Industrial Chemistry**

Curriculum emphasizes chemistry relevant to the chemical industry. Suitable for students interested in working in the petrochemical industry, especially in the development and analysis of new materials and chemical-based processes, and graduate study.

##### Geosciences

##### **Concentration in Geochemistry**

This degree is designed to meet the needs of those interested in graduate work in geology or geochemistry and careers in any one of many earth science-related industries that require knowledge of geochemistry-related issues.

##### **Concentration in Environmental Geology**

This degree is designed to meet the needs of those interested in graduate work in geology or environmental sciences and careers in the environmental industry that require knowledge of environment-related issues.

##### **Concentration in Petroleum Geotechnology**

Concentration requires several courses that cover a broad range of petroleum- and petroleum industry-related topics. This degree is designed to meet the needs of those interested in graduate work in geology and careers in the oil and gas industry that require knowledge of petroleum-related issues.

##### Minors

Bioinformatics, Biology, Chemistry, Environmental Sciences, Geology, Microbiology, and Physics.

## COMPUTER SCIENCE & ENGINEERING TECHNOLOGY

The UHD Department of Computer Science and Engineering Technology strives to provide high quality engineering technology degree programs and curricula for students from diverse social, educational, and ethnic backgrounds. Computer Science and Engineering Technology curricula reflect the demands and requirements of industries and businesses in the Greater Houston Area that enhance graduate placement opportunities.



### Degrees of Bachelor of Sciences in:

#### Computer Science

Prepare for all career paths in computer science and information technology including game development, database systems, scientific computing and simulation, graphics, artificial intelligence, software engineering, security and networking and telecommunications.

#### Control and Instrumentation Engineering Technology

Provide students with an educational experience through which they can gain a wide knowledge base and practical application skills in control and instrumentation engineering technology encompassing electrical/electronic systems, computer control, and process operation and design. This prepares students to meet the demands and requirements of the wide job market of the regional industry.

#### Structural Analysis and Design

Graduates are qualified to be members of design and operations teams in government, engineering & construction firms, industrial plants, buildings, construction materials, etc. The program prepares students to apply established engineering principles and methods to design construction and safe operation.

#### Safety Management

Students enrolled in the Safety Management program are to be exposed to the human and equipment aspects of safety. They are also trained in the ability to absorb new technologies generated from industry.

#### Minor in Bioinformatics

Combining computer science with biology and bioinformatics partners. These two disciplines produce a minor field of study in the retrieval and analysis of biochemical and biological data using mathematics and computer science, as in the study of genomes.

### Special Program:

#### Professional Engineer (PE)

The Engineering Technology Department has three programs accredited by the Technology Accreditation Commission of Accreditation Board for Engineering and Technology (TAC/ABET). These programs are Structural Analysis and Design, Control and Instrumentation, and Electronics Design. The Texas Board of Professional Engineers (TBPE) allows graduates from each of these programs to take the Fundamentals of Engineering (FE) exam leading to a Professional Engineer (PE) license.

### Research Opportunities:

#### NSF REU

Computer Science summer research opportunities at UHD with research stipends available in the areas of artificial intelligence, data mining, computing grid, and cluster networks.

## EXTENDED OPPORTUNITIES IN RESEARCH, INTERNSHIP AND LEADERSHIP

### Research/Opportunities:

#### The Joint Admission Medical Program (JAMP)

JAMP helps Texas students achieve their dreams with guaranteed admission to one of the state's nine medical schools, and financial and academic support; research stipend available.

#### Health Physics Program

The NS program is designed to qualify undergraduates for a Masters in Health Physics from any university program offering such a degree. By completing three UHD advanced physics courses, including Modern Physics, and completing calculus courses needed for physics, students will be able to matriculate to the MS level in Health Physics.

#### Texas A&M Nuclear Regulatory Commission / Partnership

Increasing the number of underrepresented STEM students in nuclear sciences, nuclear engineering, and nuclear medicine through establishment of graduate schools and industry partners. Students receive scholarships up to \$7,500 per year and summer research stipends up to \$4,000.

#### Nuclear Power Institute Certificate

This certificate is composed of four online courses. Each semester, a maximum of two courses are available for registration. These courses qualify students for employment at Texas nuclear power plants and the Fundamentals course alone qualifies students for entrance into the Texas A&M Nuclear Engineering Master's degree graduate program (with completion of other admission requirements).

#### International Research

UHD encourages international exchange programs for its faculty and students. UHD has active research and educational collaborations with three universities in Poland: Adam Mickiewicz University in Poznan; the University of Gdansk; and the Technical University of Lodz. The Royal Institute of Technology (RIT) Stockholm, Sweden partners. Research stipends are available for this summer research.

#### Applied Polymer Science Research

Provides the opportunity for undergraduate students to directly participate in basic and applied polymer science research projects that have academic and industrial significance.

#### Computing Alliance for Hispanic-Serving Institutions (CAHSI)

CAHSI develops future Hispanic leaders while addressing the under representations of Hispanics in computing. Participating Computer Science (CS) majors earns up to \$2,000 per semester.

#### Center for Urban Agriculture and Sustainability

The vision of the CUAS is that Houston citizens will apply their knowledge and resources to create sustainable neighborhoods throughout the city.

#### Pierce's Disease Research

As part of the Texas Pierce's Disease Research and Education Program, UHD directs undergraduate students in this arena of research by working in collaboration with researchers at the University of California-Riverside and the University of Texas-Tyler.

#### New York American Museum of Natural History Summer Research

Each summer, a UHD student is selected to participate in summer-long research with scientists using modern molecular and anatomical tools to study biological diversity and evolution.

#### Master in Data Analytics

An application-based program that will provide students with a broad education in advanced statistics, digital data acquisition, digital data management, data analysis, and data presentation.



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