The School of Engineering and Applied Sciences (SEAS) prepares professionals and leaders who are committed to making their community, country, and world better places. The curriculum focuses on three basic values:

• Technological and scientific competence
• Balance between theory and practice
• Consideration of the societal and holistic aspects of engineering

VISION: To be recognized nationally and internationally for its engineering and computer science education that produces transformative urban leaders

MISSION: By providing nationally competitive and accredited professional programs, we will develop creative leaders through an environment conducive to learning and research where experiential learning culture is practiced and promoted.

UNDERGRADUATE DEGREE PROGRAMS
Bachelor of Science in Biomedical Engineering (BSBME)
Bachelor of Science in Civil Engineering (BSCE)
Bachelor of Science in Computer Science (BSCS)
Bachelor of Science in Electrical Engineering (BSEE)
  Computer Engineering option
Bachelor of Science in Information Technology (BSIT)
Bachelor of Science in Mechanical Engineering (BSME)

GRADUATE DEGREE PROGRAMS
Master of Science in Civil Engineering (MSCE)
Master of Science in Computer Science (MSCS)
Master of Science in Electrical Engineering (MSEE)
Master of Science in Mechanical Engineering (MSME)

Doctor of Philosophy in Computer Science & Engineering (PhD)
  PhD with specialization in Biomedical Engineering
  PhD with specialization in Civil Engineering
  PhD with specialization in Computer Science
  PhD with specialization in Electrical & Computer Engineering
  PhD with specialization in Mechanical Engineering

TUITION AND FEES-ENGINEERING* 2020-2021
$FT per term ($PFT per credit)

<table>
<thead>
<tr>
<th>UNDERGRADUATE</th>
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<tr>
<td>FT 12—18 credits</td>
<td>FT 9 or more credits</td>
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<tr>
<td>DC Resident</td>
<td>$4,140 ($345)</td>
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<td>Metro Resident**</td>
<td>$4,800 ($400)</td>
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<td>$8,700 ($725)</td>
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*Fees per term are approximately $430
**Metro Counties: Alexandria, Arlington, Fairfax, Montgomery, Prince George’s

AFILIATED STUDENT CLUBS AND ORGANIZATIONS
American Concrete Institute (ACI)
American Society of Civil Engineers (ASCE)
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
American Society of Mechanical Engineers (ASME)
Association of Computing Machinery (ACM)
Biomedical Engineering Society (BMES)
Institute of Electrical and Electronics Engineers (IEEE)
National Society of Black Engineers (NSBE)
Robotics Club
Society of Women Engineers (SWE)
Water Environment Federation

RECENT GRANT AWARDS
NSF CREST: Center for Nanotechnology Research and Education
$4.85 million (5 years) awarded to establish CNRE at UDC and will facilitate partnerships with NIST, NRL, KCNSC, and ORL.

NASA-MIRO Center for Advanced Manufacturing in Space Technology & Research (CAM-STAR)
$3 million (3 years) awarded to establish CAM-STAR to focus on investigating various advanced manufacturing techniques and their application in space exploration research and technology.

NIST Grant: Professional Research Experience Program at the University of the District of Columbia (PREP-UDC)
$6.76 million (5 years) undergraduate, graduate, and post graduate opportunities to do paid research at NIST.
STUDENT SERVICES
Career Exploration and Planning
Free Tutoring
Mid-term, Final Exam Review Sessions
Academic, Personal, Career Counseling
Faculty Advisor in the major

SCHOLARSHIPS
There are a number of merit-based and need-based scholarship opportunities available to students enrolling in majors at SEAS.

UNDERGRADUATE ENTRANCE REQUIREMENTS
A candidate for admission must have earned a high school diploma, GED, or equivalent. Refer to the Admissions Office for detailed entrance requirements for freshmen and transfer students.

International students
In addition to undergraduate entrance requirements, international students must meet the English proficiency requirements. **TOEFL Paper 550, iBT 79, IELTS 6.0**

GRADUATE ENTRANCE REQUIREMENTS
Graduate students must have a degree in the discipline of interest from an accredited post-secondary institution. Students may be required, upon admittance, to take foundational background courses.

INDUSTRIAL ADVISORY BOARDS
Each department has an Industrial Advisory Board composed of members of industry and business who assist in senior capstone projects, financial, technical, and equipment resources, professional development, fostering interaction and collaboration among the college and industry, and building career-ready engineers for the future.

Background photo:
Joshua Dillard, mechanical engineering sophomore, is a research assistant in the NSF CREST funded Center for Nanotechnology Research and Education (CNRE) at UDC.

Schools and Colleges of the UNIVERSITY OF THE DISTRICT OF COLUMBIA
Community College
College of Agriculture, Urban Sustainability and Environmental Sciences (CAUSES)
College of Arts and Sciences (CAS)
School of Business and Public Administration (SBPA)
School of Engineering and Applied Sciences (SEAS)
David A. Clarke School of Law

ACCREDITATION
The UDC is regionally accredited by the Middle States Commission on Higher Education.

The Accreditation Board for Engineering and Technology (ABET) has granted continued accreditation status for the baccalaureate degree programs. [www.abet.org](http://www.abet.org)

Engineering Accreditation Commission
Civil Engineering (BSCE)
Electrical Engineering (BSEE)
Mechanical Engineering (BSME)

Computing Accreditation Commission
Computer Science (BSCS)

International Mutual Recognition Agreements:
The Washington Accord recognizes the civil, electrical, and mechanical engineering degree programs and the Seoul Accord recognizes the computer science degree program.

INTERNSHIPS
• Applied Control Engineering, Inc.
• Beta Technologies
• Boston Scientific
• Eli Lilly and Company
• Johns Hopkins Applied Physics Lab
• Microsoft
• Molex Inc
• NASA
• Naval Research (NREIP)
• National Institute of Standard and Technology (NIST)
• Oak Ridge National Lab
• San Francisco International Airport
• US Naval Research Lab
• Warner Bros Technology

INDUSTRY PARTNERSHIPS
• Air Force Research Laboratory
• Dept of Energy National Nuclear Security Admin (DOE-NNSA)
• Department of Defense
• D.C. Water Resources Research Institute (WRRI)
• Food and Drug Administration (FDA)
• Lockheed Martin
• MedStar National Rehabilitation Network
• National Institutes of Health (NIH)
• National Institute of Standard and Technology (NIST)
• National Science Foundation (NSF)
• Northrop Grumman
• Verizon
• Washington Metropolitan Area Transit Authority (WMATA)
• Xerox Corporation
Bachelor of Science in Biomedical Engineering (BSBME)
Biomedical engineering is the application of engineering principles to the fields of biology and health care to solve medical-related problems. Students have access to the BME Lab, Center for Biomechanical and Rehabilitation Engineering, focused on balance and mobility aids and devices, injury prevention, and treatment.

Bachelor of Science in Civil Engineering (BSCE)
Civil engineering is the planning, design, construction, and maintenance of the physical and naturally built environment, including roads, bridges, canals, dams, water supply, sewage treatment, and buildings. Civil engineers design, build, supervise, operate, and maintain construction projects and systems.

Bachelor of Science in Electrical Engineering (BSEE)
Electrical engineering is the study and application of electricity, electronics, and electromagnetism. Electrical engineers work on a wide range of components, devices and systems, from tiny microchips to huge power station generators. There are many subfields of electrical engineering, including electronics, digital computers, power engineering, telecommunications, control systems, radio-frequency engineering, signal processing, instrumentation, and microelectronics. The Computer Engineering option is available within the BSEE program.

Bachelor of Science in Mechanical Engineering (BSME)
Mechanical engineering is the discipline that applies engineering, physics, and materials science principles to design, analyze, and manufacture systems. It involves the design, production, and operation of machinery. In addition to using the principles of engineering science and 3D printing, mechanical engineers use tools such as computer-aided design (CAD) and product life-cycle management to build safe and economical machines.

Bachelor of Science in Computer Science (BSCS)
A computer scientist specializes in the theory of computation and the design of computational systems to solve problems and may specialize in a wide range of areas including computer architecture, software systems, graphical interface, artificial intelligence, computational science, and software engineering.

Bachelor of Science in Information Technology (BSIT)
Information Technology is the use of computers and software to manage information. Students are exposed to networking and system administration, web and social media/multimedia content development, programming and application development, including database management systems, cyber security, and web applications, and technology integration.

LABORATORIES AND FACILITIES
All degree programs offer experiential learning through educational and research labs.

RESEARCH
Students, both undergraduate and graduate, may participate in research projects.

INTERNSHIPS
We strive to assist all students with internship opportunities in their discipline.

WORK-STUDY
Work study opportunities are available within the college related to each academic discipline.
Residency of Enrolled SEAS Majors
Fall 2019

- DC Residents, 52%
- Non-Residents, 34%
- Metro Residents*, 14%

*Metro Resident Counties: Alexandria, Arlington, Fairfax, Montgomery, Prince George's

SEAS Majors DC Residents

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<tr>
<td>Fall 2016</td>
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<td>Fall 2017</td>
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<td>Fall 2018</td>
<td>194</td>
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<td>Fall 2019</td>
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Residency for All Majors
School of Engineering and Applied Sciences

- Non-Residents
- DC Residents
- Metro Residents*

Enrollment History Fall 2015 – Fall 2019
School of Engineering and Applied Sciences

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<thead>
<tr>
<th>Year</th>
<th>UG Total</th>
<th>GR Total</th>
<th>UG + GR Total</th>
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<td>Fall 2019</td>
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*Metro Resident Counties: Alexandria, Arlington, Fairfax, Montgomery, Prince George's