



# Doctor of Philosophy in Computer Science and Engineering

The University of the District of Columbia is a public, historically black, land-grant institution offering affordable programs from the associate to doctoral degree level. With the **Ph.D. in Computer Science and Engineering**, the School of Engineering and Applied Sciences (SEAS) provides a continuous path for obtaining advanced education in various disciplines of computer science and engineering.

## About the Program

The Ph.D. program has an interdisciplinary focus with emphasis on **design thinking and the ability to solve complex problems**. Doctoral research will focus on the interface between computer science and engineering, including additive manufacturing, biomedical engineering, mechatronics, artificial intelligence, machine learning, nanotechnology, simulation, modeling, smart grids, rehabilitation engineering, cyber security, big data analysis, robotics, and storm water management. Ph.D. research thesis results will be published in peer reviewed publications aligning thesis outcomes with research priorities supported by NSF, DOD, NIST, DOE, and NIH.

## Curriculum

The Ph.D. program will enhance the existing M.S. and B.S. degree programs in Civil Engineering, Electrical Engineering, Mechanical Engineering, and Computer Science, and provide faculty-led research opportunities and projects through the new **SEAS Research Center**.

## Active Grants

Initial grant funding support is from the Department of Defense, Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI) Science Program.

## Doctoral Program Specializations

- ◆ Specialization in Biomedical Engineering
- ◆ Specialization in Civil Engineering
- ◆ Specialization in Computer Science
- ◆ Specialization in Electrical Engineering
- ◆ Specialization in Mechanical Engineering

UDC

Turning Potential *into* Power

## Research Centers

### Center for Advanced Manufacturing in Space Technology & Applied Research at UDC (CAM-STAR)

The Center for Advanced Manufacturing in Space Technology & Applied Research (CAM-STAR) at UDC will focus on research investigating various advanced manufacturing (AM) techniques and their application in Space Exploration Technology and Research.

**Program Director:** Dr. Jiajun Xu,  
[jiajun.xu@udc.edu](mailto:jiajun.xu@udc.edu)

### Center for Biomechanical & Rehabilitation Engineering (CBRE)

The CBRE lab is focused on studying human mobility (including balance, posture, and gait) for unimpaired as well as impaired populations.

**Program Director:** Dr. Lara Thompson,  
[lara.thompson@udc.edu](mailto:lara.thompson@udc.edu)

### Center for Nanotechnology Research and Education (CNRE)

The CNRE uses UDC faculty's core expertise in nanotechnology to establish a nationally recognized center of excellence to realize UDC's goals of supporting B.S., M.S., Ph.D., and Postdoctoral level research and professional development.

**Program Director:** Dr. Pawan Tyagi,  
[ptyagi@udc.edu](mailto:ptyagi@udc.edu)

### SEAS Research Center

The SEAS Research Center performs research for large and small companies, government agencies, and organizations focused on solving engineering problems in partnership with SEAS.

**Director:** Dr. Paul Cotae, [pcotae@udc.edu](mailto:pcotae@udc.edu)

## FOR MORE INFORMATION

### Ph.D. Program Director

Dr. Paul Cotae  
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### Office of Admissions

[www.udc.edu/admissions/graduate](http://www.udc.edu/admissions/graduate)  
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