ELECTRICAL ENGINEERING

UNIVERSITY OF THE DISTRICT OF COLUMBIA
SCHOOL OF ENGINEERING AND APPLIED SCIENCES

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Accredited by the Engineering Accreditation Commission of ABET
http://www.abet.org

Electrical Engineering (EE) is a wide discipline that provides society with many critical utilities. Electrical Engineering has an extensive impact on national defense and secruity, the environment, energy generation and distribution, computing systems, consumer electronics, transportation, public welfare and safety, health and healthcare, as well as leisure. Electrical Engineers develop and implement innovative technology solutions that aid us in modern society, and they are urgently needed today to help solve a variety of global problems. Are you interested in learning how computing devices, cell phones, robots, digital audio, computer networks, or search engines work? Do you enjoy working to bring new ideas to life? If so, this is the major to pursue!

As an Electrical Engineer you can secure employment in the private and public sectors, government agencies, and beyond. EE graduates work with a broad range of electrical and electronic devices and systems, i.e. mobile communications systems (cell phones), renewable energy (solar panels, wind turbines), hybrid electric cars (Prius), wireless communications (Bluetooth), satellite systems (GPS), medical diagnostics, surgical tools (medical robots), digital video (HDTV), bioelectronics (pacemakers), and radar (Doppler weather radar).

As an Electrical Engineer, you will be required to have a strong technical background in math, science, and engineering principles, as well as excellent communication skills. The UDC Electrical Engineering undergraduate program is designed to permit studies over a broad base of fundamental subdisciplines of various areas of the topic that includes communications, solid state electronics, wireless sensors, signal processing, digital electronics, and solar energy.

The program emphasizes hands-on learning and excellence in design. During the first and second years, focus is placed on strengthening your math, science, and basic engineering. In the third and fourth years, focus is placed on various subdisciplines and on preparing students for professional careers and/or graduate studies.

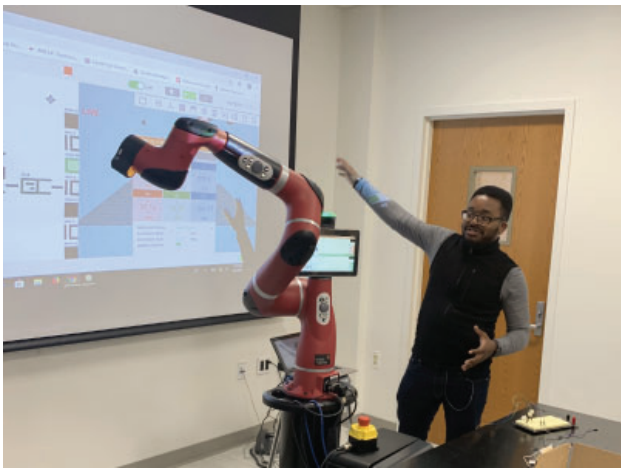
Your total 128-credit-hour curriculum consists of:

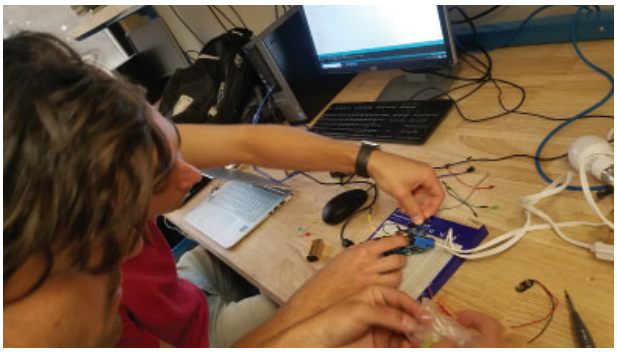
Basic Science and Mathematics 32
General Education (with emphasis on freedom, responsibility, and the pursuit of learning) 25
Technical electives 22
Electrical Engineering Core 49

University of the District of Columbia
School of Engineering and Applied Sciences

WHY A BS IN ELECTRICAL ENGINEERING AT UDC?

• UDC Electrical Engineering program is ABET-accredited • Student-focused campus mission • Covers a wide range of electrical and computer engineering topics • Average class size is less than 15 • Lower tuition fees compared to other schools • Convenient to Metropolitan DC Area residents





What makes UDC's Electrical Engineering program different?

The Electrical Engineering program at UDC is designed with the success of the individual student in mind. With smaller class sizes, students benefit from a personal teaching environment and individual attention.

How will my credits transfer?

Once you are enrolled, an electrical engineering faculty member will evaluate your previous courses and academic record and let you know about transfer credits.

May I speak to a current UDC student?

Contact the undergraduate program director to be connected with a continuing or recently graduated student who will share their experience with you.

"My goal was to excel academically. It is one of the reasons why every time I was told that a specific field was geared towards men, I would do my best to join that field, and do extremely well in it. It is also the reason why I chose the University of the District of Columbia, an excellent institution, with accredited engineering programs that could give me a top education at an affordable price."

~ FATOU MBENGUE | Class of 2009

For more information about BS in the Electrical Engineering, visit www.udc.edu/seas or contact:

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202-274-6290, pcotae@udc.edu

Program Director, Dr.Wagdy Mahmoud
202-274-5239, wmahmoud@udc.edu

Department Office, Ms. Clara Cooper
202-274-5740, cvcooper@udc.edu

UNIVERSITY OF THE DISTRICT OF COLUMBIA
SCHOOL OF ENGINEERING AND APPLIED SCIENCES
Department of Electrical and Computer Engineering
OFFICIAL ADVISORY FORM (Starting Fall 2017)

Program ELECTRICAL ENGINEERING
Name of Student _____ Student ID # _____
Name of Advisor _____ Room # _____

First Semester				**Second Semester**			
Course #	Subject	Credits	Grade	Course #	Subject	Credits	Grade
IGED 110	Found. Writing I	3		IGED 111	Found. Writing II	3	
CHEM 111	General Chemistry I Lec.	3		MATH 152	Calculus II Lec.	3	
CHEM 113	General Chemistry I Lab	1		MATH 156	Calculus II Lab	1	
MATH 151	Calculus I Lec.	3		PHYS 201	University Physics I Lec	3	
MATH 155	Calculus I Lab	1		PHYS 205	University Physics I Lab	1	
CCEN 101	Intro. to Elec.&Comp Eng	2		APCT 231	Intro. to Comp. Sci. I Lec	3	
IGED 130	Found. Oral Comm.	3		APCT 233	Intro. to Comp. Sci. I Lab	1	
TOTAL CREDITS		16		**TOTAL CREDITS**		15	

Third Semester				**Fourth Semester**			
Course #	Subject	Credits	Grade	Course #	Subject	Credits	Grade
IGED 210	Discovery Writing	3		IGED 140	Foundation Ethics	3	
PHYS 202	University Physics II Lec.	3		MATH 260	Differential Eq. with Linear Alg.	4	
PHYS 206	University Physics II Lab	1		PHYS 203	University Physics III Lec.	3	
CVEN 201	Engineering Mechanics I	3		PHYS 207	University Physics III Lab	1	
ELEC 225	Electrical Circuits Lec.	3		ELEC 241	Assembly Language and Microprocessor Lec.	3	
ELEC 226	Electrical Circuits Lab	1		ELEC 242	Assembly Language and Microprocessor Lab	1	
TOTAL CREDITS		14		**TOTAL CREDITS**		15	

Fifth Semester				**Sixth Semester**			
Course #	Subject	Credits	Grade	Course #	Subject	Credits	Grade
ELEC 301	Engineering Mathematics	3		CVEN 308	Applied Numerical Analysis for Engineers	3	
ELEC 315	Comp. Organization Lec.	3		ELEC 352	Electronics II Lec.	3	
ELEC 316	Comp. Organization Lab	1		ELEC 354	Electronics II Lab	1	
ELEC 351	Electronics I Lec.	3		ELEC 307	Prob. and Stat. for Eng.	3	
ELEC 353	Electronics I Lab	1		ELEC 371	Signals and Systems Lec.	3	
ELEC 356	Physical Electronics	3		ELEC 374	Signals and Systems Lab	1	
ELEC 361	Electromagnetic Theory	3		IGED 280	Discovery Civics	3	
TOTAL CREDITS		17		**TOTAL CREDITS**		17	

Seventh Semester				**Eighth Semester**			
Course #	Subject	Credits	Grade	Course #	Subject	Credits	Grade
ELEC 467	Fund. of Comm. Lec	3		IGED 270	Discovery Diversity	3	
ELEC 476	Fund. of Comm. Lab	1		ELEC 496	Senior Project II (Capst.)*	3	
ELEC 470	Control Sys. & Appl. Lec.	3		ELEC xxx	Electrical Eng. Elective**	4	
ELEC 477	Control Sys. & Appl. Lab	1		ELEC xxx	Electrical Eng. Elective**	3	
ELEC 495	Senior Project I (Capst.)*	3		MECH 406	Engineering Economics	3	
ELEC xxx	Electrical Eng. Elective**	4					
ELEC xxx	Electrical Eng. Elective**	3					
TOTAL CREDITS		18		**TOTAL CREDITS**		16	

TOTAL CREDITS **128**

*Will contain intensive writing component

**Electrical Engineering Electives (most current) : ELEC 458, ELEC 469/473, ELEC 471, ELEC 474, ELEC 478/479, ELEC 480/483, ELEC 463, ELEC 461/462, MECH 487, MECH 478, MECH 461, ELEC410/510, ELEC420/520, or equivalent CS 400 level courses.

NOTE: The EE electives selected must have at least one lab course (4 credits for the course and lab).

A completed copy of this form must accompany each student's Graduation Clearance Form

Electrical Engineering Program Required Courses Pre-Requisites and Co-requisites

Course #	Pre-Requisites	Co-requisites
CCEN 101	Engineering Freshman Status	None
CVEN 201	PHYS 201, PHYS 205	None
ELEC 225	PHYS 201, PHYS 205	ELEC 226
ELEC 226	PHYS 201, PHYS 205	ELEC 225
ELEC 241	APCT 231, and APCT 233	ELEC 242
ELEC 242	APCT 231, and APCT 233	ELEC 241
ELEC 301	MATH 152, MATH 156, MATH 260	None
ELEC 307	MATH 152, MATH 156	None
CVEN 308	MATH 260	None
ELEC 315	ELEC 221, ELEC 223	ELEC 316
ELEC 316	ELEC 221, ELEC 223	ELEC 315
ELEC 351	ELEC 225, ELEC 226	ELEC 353
ELEC 352	ELEC 351, ELEC 353	ELEC 354
ELEC 353	ELEC 225, ELEC 226	ELEC 351
ELEC 354	ELEC 351, ELEC 353	ELEC 352
ELEC 371	ELEC 351, ELEC 353, ELEC 301	ELEC 374
ELEC 374	ELEC 351, ELEC 353, ELEC 301	ELEC 371
MECH 406	Senior Standing	
ELEC 467	ELEC 307, ELEC 371, ELEC 374	ELEC 476
ELEC 470	ELEC 371, ELEC 374	ELEC 477
ELEC 476	ELEC 307, ELEC 371, ELEC 374	ELEC 467
ELEC 477	ELEC 371, ELEC 374	ELEC 470
ELEC 495	ELEC 315, ELEC 316, ELEC 352, ELEC 353, ELEC 371, ELEC 374	None
ELEC 496	ELEC 495	None

Electrical Engineering Program Elective Courses Pre-Requisites and Co-requisites

Course #	Pre-Requisites	Co-requisites
ELEC 410		
ELEC 420	ELEC 352, ELEC 354	None
ELEC 458	ELEC 371, ELEC 374	None
ELEC 461	ELEC 352, ELEC 354	ELEC 462
ELEC 462	ELEC 352, ELEC 354	ELEC 461
ELEC 463	ELEC 352, ELEC 354, ELEC 361	None
ELEC 469	ELEC 467, ELEC 476, ELEC 307	ELEC 473
ELEC 471	ELEC 470, ELEC 473	
ELEC 473	ELEC 467, ELEC 476, ELEC 307	ELEC 469
ELEC 480	ELEC 315, ELEC 316	ELEC 483
ELEC 483	ELEC 315, ELEC 316	ELEC 480
ELEC 478	ELEC 315, ELEC 316, ELEC 352, ELEC 354	ELEC 479
ELEC 479	ELEC 315, ELEC 316, ELEC 352, ELEC 354	ELEC 478