COLLEGE OF ENGINEERING AND ARCHITECTURE

ELECTRICAL ENGINEERING

BACHELOR OF SCIENCE

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Curriculum 2026 - 2027

1867 HOWARD UNIVERSITY

4-YEAR ADVISING SCHEME

Students seeking the **Bachelor of Science in Electrical Engineering** must complete a minimum of 120 credit hours comprised of core courses in electrical engineering (44 credits), electrical engineering electives (12 credits), electrical engineering or computer engineering electives (6 credits), science and mathematics courses (40 credits), and general curriculum courses (18 credits), including an African American Studies elective (3 credits).

FALL SEMESTER 1

Number	Course Title	Credits
MATH 156	Calculus I	4
EGPP 101	Intro to Engineering	2
CSCI 135	Computer Science I	4
CHEM 003	General Chemistry I Lecture	4
CHEM 005	General Chemistry I Lab	1
	Total Credits	15

SPRING SEMESTER 1

Number	Course Title	Credits
MATH 157	Calculus II	4
EECE 102	Intro to Electrical & Computer Engineering	1
EECE 260	Engineering Programming and Application	3
PHYS 013	Physics I Lecture (Science and Engineering)	3
PHYS 023	Physics I Lab (Science and Engineering)	1
ENGW ---	English First-Year Writing (1)	3
	Total Credits	15

FALL SEMESTER 2

Number	Course Title	Credits
MATH 158	Calculus III	4
PHYS 014	Physics II Lecture (Science and Engineering)	3
PHYS 024	Physics II Lab (Science and Engineering)	1
EECE 212	Fundamentals of Digital Systems	4
EECE 218	Fundamentals of Digital Systems Lab	1
MATH 159	Differential Equations	4
	Total Credits	17

SPRING SEMESTER 2

Number	Course Title	Credits
EECE 160	Engineering Mathematics	4
EECE 203	Fundamentals of Circuit Theory	4
EECE 209	Fundamentals of Circuit Theory Lab	1
ENGW ---	English First-Year Writing (2)	3
--	Social Science Elective	3
	Total Credits	15

FALL SEMESTER 3

Number	Course Title	Credits
EECE 305	Fundamentals of Electromagnetics	4
EECE 306	Fundamentals of Electromagnetics Lab	1
EECE 309	Fund of Electronics and SS Devices	4
EECE 312	Fund of Electronics and SS Devices Lab	1
EECE 331	Probability and Statistics for Eng. Appl	3
--	Humanities Elective	3
	Total Credits	16

SPRING SEMESTER 3

Number	Course Title	Credits
EECE 333	Fundamentals of Signals and Systems	4
EECE 325	Fundamentals of Energy Systems	4
EECE 326	Fundamentals of Energy Systems Lab	1
--	African American Studies Elective	3
--	Math/Science Elective	3
	Total Credits	15

FALL SEMESTER 4

Number	Course Title	Credits
--	EE Elective	3
--	EE Elective	3
--	EE Elective	3
--	EE Elective	3
EECE 401	Senior Design I	3
	Total Credits	15

SPRING SEMESTER 4

Number	Course Title	Credits
--	EE Elective	3
--	EE/CpE Elective	3
EECE 404	Senior Design II	3
ECON 001	Principles of Economics	3
	Total Credits	12

Total Credits: 120

More Information :

The 4-Year Advising Scheme is a guide for students to successfully complete the program in four years of study. It is not a substitution for academic advising. Students are expected to check-in with their academic advisor every semester.

The prerequisite structure for courses and technical elective options are available in the program handbook.

Courses may not be offered in semesters in which they do not appear listed on the scheme.

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
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PREREQUISITES

Some courses in the curriculum have prerequisites that must be satisfied before being permitted to enroll in that course. Below are courses within the Architecture curriculum that have a prerequisite. Contact your academic advisor to address prerequisite error messages that may appear when registering for a course.

CORE COURSES

Course Number/ Title /Credits	Prerequisite / Co-requisite
EECE 102 Intro to Electrical & Computer Engineering (1)	EGPP 101 (2)
EECE 160 Engineering Mathematics (4)	MATH 158 (4)
EECE 203 Fundamentals of Circuit Theory (4)	PHYS 014 (3), PHYS 024 (1) / EECE 209 (1)
EECE 209 Fundamentals of Circuit Theory Lab (1)	PHYS 014 (3), PHYS 024 (1) / EECE 203 (4)
EECE 212 Fundamentals of Digital Systems (4)	-- / EECE 218 (1)
EECE 218 Fund of Digital Systems Lab (1)	-- / EECE 212 (4)
EECE 305 Fund: Electromagnetics (4)	MATH 158 (4) / EECE 306 (1)
EECE 306 Fund: Electromagnetics Lab (1)	-- / EECE 305 (4)
EECE 309 Fundamentals of Electronics & SS Devices (4)	EECE 203 (4) / EECE 312 (1)
EECE 312 Fundamentals of Electronics & SS Devices Lab (1)	EECE 209 (1) / EECE 309 (4)
EECE 325 Fundamentals of Energy Systems (4)	EECE 203 (4) / EECE 326 (1)
EECE 326 Fundamentals of Energy Systems Lab (1)	-- / EECE 325 (4)
EECE 331 Probability & Statistics for Engineers Applications (3)	MATH 157 (4)
EECE 333 Fundamentals of Signals & Systems (4)	MATH 158 (4)
EECE 401 Senior Design I (3)	Senior Standing
EECE 404 Senior Design II (3)	EECE 401 (3)

MATH COURSES

Course Number/Title/Credits	Prerequisite
MATH 156 Calculus I (4)	Math 007, or Math Placement Score
MATH 157 Calculus II (4)	Math 156 (4)
MATH 158 Calculus III (4)	Math 157 (4)
MATH 159 Differential Equations (4)	Math 157 (4)

ENGLISH COURSES

Course Number/Title/Credits	Prerequisite
ENGW 102/104 English First-Year Writing (3)	English Placement Score or ACTE/SATW
ENGW 103/105 English First-Year Writing (3)	"C" or better in ENGW 101/102/104 English First-Year Writing (3)

SCIENCE COURSES

Course Number/Title/Credits	Prerequisite
PHYS 013 General Physics for Sci and Eng Students I	-- / Math 156 (4)
PHYS 014 General Physics for Sci and Eng Students II	PHYS 013 (3) / Math 157 (4)

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