

# ENTRY REQUIREMENTS

## WASSCE/NECO:

Minimum C6 in 6 subjects including 3 core subjects (Maths and English mandatory) and 3 elective subjects. (Elective /Add/Further Maths and Physics mandatory)

## SSSCE:

Minimum D or a pass in 6 subjects including 3 core subjects (Maths and English mandatory) and 3 elective subjects. (Elective /Add/Further Maths and Physics mandatory)

## IGCSE O-LEVEL & A-LEVEL:

Minimum of 5 credit passes in the IGCSE/O-Levels (including Maths and English) and 3 passes in the A-Levels. (Elective /Add/Further Maths and Physics mandatory)

## ENGLISH IB:

Minimum of 5 credit passes in the IGCSE/O-Levels (Maths and English mandatory) and a minimum score of 4 points in 3 Higher Level (HL) subjects. (Elective /Add/Further Maths and Physics mandatory)

## FRENCH IB:

Minimum of 50% overall average pass. (subject to approval NAB) (Maths, English and Physics mandatory)

## AMERICAN HIGH SCHOOL:

Minimum GPA of 3.0 (Maths, English and Physics mandatory)



ACADEMIC CITY  
UNIVERSITY COLLEGE



ENGINEERING

## BSc. Electrical & Electronics Engineering

Electrical and electronics engineering students engage in a technical discipline featuring the in-depth study, design, and application of equipment, devices, and systems that use electricity, electronics, and electromagnetism for the development of groundbreaking products.

## HOW TO APPLY

Complete the online application form:  
[www.acity.edu.gh/applyonline](http://www.acity.edu.gh/applyonline)  
OR

Email: [admissions@acity.edu.gh](mailto:admissions@acity.edu.gh)

## #Ask^City

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📱 @acitygh

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Redefining University Education

## SEMESTER 1

### Course Name

Communication Skills  
 French Language  
 Fundamentals of Innovation and Entrepreneurship (FIE) Seminar I  
 Introduction to Engineering  
 Introduction to Programming with Python  
 Physical Sciences  
 Pre-Calculus (with MATLAB)  
 Technology and Society

## SEMESTER 2

### Course Name

Analytic Geometry and Calculus I (with MATLAB)  
 Introduction to Electrical and Electronics Engineering  
 Fundamentals of Innovation and Entrepreneurship (FIE) Seminar II  
 Introduction to Multidisciplinary Design  
 Logic and Critical Thinking  
 Programming in C  
 Sensors, Measurements and Instrumentation  
 Text and Meaning

## SEMESTER 5

### Course Name

Differential Equations (with MATLAB)  
 Digital Systems Design  
 Leadership Seminar II  
 Microelectronics  
 Numerical Methods (with MATLAB)  
 Power Electronics  
 Signals and Systems  
 Systems Dynamics

## SEMESTER 6

### Course Name

Automatic Control Systems  
 Electric Power Generation, Transmission and Distribution  
 Embedded Systems  
 Industry Internship  
 Mechatronics  
 Principles of Communication Systems  
 Project Management, Engineering Economics and Risk Analysis

## SEMESTER 3

### Course Name

Analytic Geometry and Calculus II (with MATLAB)  
 Circuit Theory  
 Electrical Energy Conversion and Green Electronics  
 Electromagnetic Fields and Waves Theory  
 Fundamentals of Innovation and Entrepreneurship (FIE) I  
 Introduction to Material Science and Engineering  
 Leadership Seminar I

## SEMESTER 4

### Course Name

African Studies  
 Applied Linear Algebra (with MATLAB)  
 Electrical Machines  
 Fundamentals of Innovation and Entrepreneurship (FIE) II  
 Introduction to Contemporary Electric Power Systems  
 Probability, Statistics and Reliability (with MATLAB)

## SEMESTER 7

### Course Name

Engineering Thermodynamics  
 Probabilistic Systems Analysis and Applied Probability  
 Project Phase I  
 Technical Elective - I  
 Technical Elective - II

## SEMESTER 8

### Course Name

Environmental Science and Engineering  
 Professional Ethics and Values  
 Project Phase II  
 Technical Elective - III  
 Technical Elective - IV

### Power Systems Engineering

Advanced Power Generation, Transmission and Distribution  
 Power System Operation and Control  
 Electric Power Systems Analysis and Design  
 Power System Protection and Switchgear

## ELECTIVES

### Renewable Energy Systems

Smart Grid  
 Solid State Electronic Devices  
 Energy Management for a Sustainable Future  
 Green Electronics

### Radio Frequency (RF) and Microwave Circuits Design

Microwave Engineering  
 Radio Frequency (RF) Circuits Design  
 Optoelectronic Devices  
 VLSI Design

### Intelligent Systems: Robotics and Mechatronics

Advanced Control Systems  
 Industrial Automation and Robotics  
 Artificial Intelligence and Robotics  
 Modeling and Analysis of Mechatronic Systems

### Intelligent Systems: Controls and Automation

Advanced Control Systems  
 Computer Architecture and Organisation  
 Artificial Intelligence and Robotics  
 Modeling and Analysis of Mechatronic Systems

### Biomedical Engineering

Biomedical Instrumentation  
 Biomedical Signal Analysis  
 Real-Time Digital Signal Processing  
 Wireless Networks