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)

HOW TO APPLY

Complete the online application form:
www.acity.edu.gh/applyonline
OR
Email: **admissions@acity.edu.gh**

#AskACity

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ACADEMIC CITY
UNIVERSITY COLLEGE

ENGINEERING

BSc. Mechanical Engineering

Students receive a holistic overview of how mechanical systems work together to produce machines. They are given the fundamental principles, to start off on an experiential learning trajectory, providing students with hands-on development of sample systems in real-life design-and-build projects.

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)

Engineering Mechanics

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 3

Course Name

Analytic Geometry and Calculus II (with MATLAB)

Computer-Aided Design and Manufacturing (CAD and CAM)

Electronics and Microprocessors

Engineering Thermodynamics

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)

Fluid Mechanics

Fundamentals of Innovation and Entrepreneurship II

Manufacturing Processes I

Mechanics of Machines I

Probability, Statistics and Reliability (with MATLAB)

SEMESTER 5

Course Name

Differential Equations (with MATLAB)

Leadership Seminar II

Machine Design

Manufacturing Processes II

Mechanics of Machines II

Mechanics of Materials

Numerical Methods (with MATLAB)

Systems Dynamics

SEMESTER 6

Course Name

Applied Hydraulics and Pneumatics

Automatic Control System

Gas Dynamics and Jet Propulsion

Industry Internship

Internal Combustion Engines and Steam Turbine

Mechatronics

Project Management, Engineering Economics and Risk Analysis

SEMESTER 7

Course Name

Industrial Automation and Robotics

Project Phase I

Quality Control and Reliability Engineering

Technical Elective – I

Technical Elective – II

Thermal Engineering

SEMESTER 8

Course Name

Environmental Science and Engineering

Maintenance Engineering

Professional Ethics and Values

Project Phase II

Technical Elective III

Technical Elective – IV

ELECTIVES

Thermo-Fluids Systems

Computational Fluid Dynamics
Refrigeration and Air Conditioning
Fluid Machinery
Heat and Mass Transfer

Robotics

Advanced CAD and CAM
Design of Transmission Systems
Advanced Control Systems
Modelling and Analysis of Mechatronic Systems

Aerospace Engineering

Advanced Control Systems
Computational Fluid Mechanics
Composite Materials and Structures
Mechanical Vibrations

Biomedical Engineering

Biofluid Mechanics
Biomechanics
Biomaterials
Rehabilitation Engineering

Design and Manufacturing

Design of Jigs, Fixtures and Tools
Unconventional Machining Process
Composite Materials and Structures
Computer Integrated Manufacturing

Energy Systems

Heat and Mass Transfer
Refrigeration and Air Conditioning
Renewable Energy
Thermal Turbo Machines

Mechanical Design

Advanced CAD and CAM
Design of Machine Elements
Design of Jigs, Fixtures and Tools
Modelling and Analysis of Mechatronic Systems