



American  
Open University  
Nigeria



Undergraduate Program

College of Technology

# Bachelor of Science in Software Engineering

Engineering robust, scalable software: architecture, development practice, and the teamwork that ships high-quality systems for a global market.



# Engineer the Future

Educating the builders of robust, scalable software for a global market.



*Programs must be written for people to read, and only incidentally for machines to execute.*

**Harold Abelson and Gerald Jay Sussman** Structure and Interpretation of Computer Programs, 1985

The Bachelor of Science in Software Engineering is a rigorous program focused on the disciplined principles of designing, building, testing, and deploying robust and scalable software solutions. This program goes beyond just coding to instill a deep understanding of software architecture, development methodologies, and collaborative teamwork, preparing graduates to engineer high-quality software for a global market. The program provides a comprehensive foundation in software engineering, allowing students to specialize through advanced elective courses and capstone projects in areas such as Enterprise Systems, Full-Stack Development, and Cloud-Native Applications.

## Specialization focus



Enterprise Systems



Full-Stack Development



Cloud-Native Applications



Software Architecture

● Undergraduate program of the College of Technology, American Open University Nigeria (A-Global).

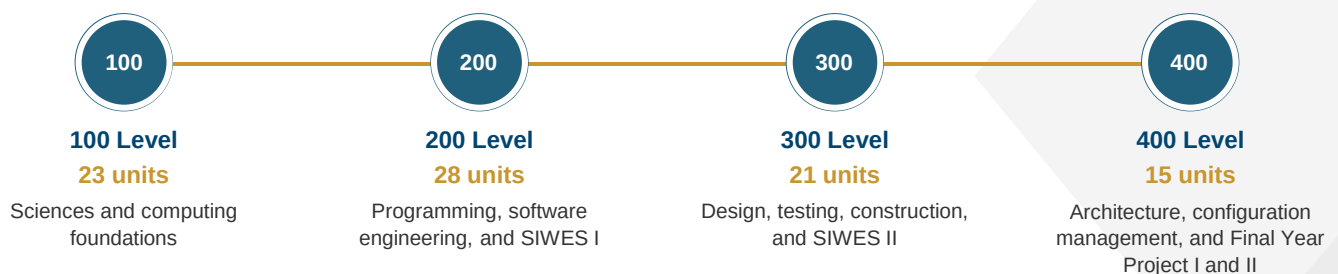


# Program at a Glance

Four years. One degree. A specialization built for the people who engineer the software the world runs on.



## Your journey through the program



**+ 60** credit units of A-Global electives run alongside the core: 20 applied courses, 3 units each, delivered in 8-week blocks.

## Program objectives

The Bachelor of Science in Software Engineering aims to:



Instill the principles of disciplined software engineering, including requirements analysis, design patterns, and testing.



Develop advanced proficiency in modern programming languages, frameworks, and development platforms.



Foster the collaborative skills necessary to thrive in agile development environments.



Prepare graduates for specialized, high-impact careers in the competitive global technology industry.



# What You Will Learn

Students will build a comprehensive portfolio of skills, moving from foundational theory to specialized, real-world application.

Specialized  
application

4



## Specialized Application Development

Dive deep into advanced electives, learning enterprise integration patterns, cloud-native development, or full-stack application design.

3



## Languages, Frameworks, and Platforms

Gain hands-on experience with in-demand programming languages (e.g., Python, Java, C#, JavaScript) and industry-standard frameworks (e.g., .NET, React, Node.js).

2



## Modern Development Practices

Become proficient in the tools and methodologies that drive professional software teams, including Agile/Scrum, version control with Git, and CI/CD pipelines.

1



## Core Engineering Principles

Master the fundamentals of computer science, including data structures, algorithms, object-oriented design, and software architecture.

Foundational  
theory

Read the stack from the base up: the fundamentals first, then the practices of professional teams, then the languages and frameworks in demand, and finally the specialized application work you choose.



# Expected Program-Level Outcomes

Every A-Global program is designed through the EDGE Instructional Framework, so its outcomes are stated the way the framework thinks: what you learn, who you become, where you apply it, and how you lead.



## The EDGE Framework

A learner-centric model that guides the design of every program we offer, emphasizing individual growth, empowerment, and career advancement.

### **E Educate** (The What)

Students will acquire a deep understanding of computer science fundamentals, including algorithms, data structures, and software architecture.

### **D Develop** (The Who)

Students will demonstrate proficiency in the entire software development lifecycle, from ideation to deployment and maintenance.

### **G Grow** (The Where)

Students will be able to apply engineering principles to build complex applications and work effectively in professional development teams.

### **E Empower** (The How)

Students will be prepared to architect and lead the development of innovative software solutions in their chosen domain.

## Every A-Global graduate is designed to be

### **Future-Ready**

Equipped to adapt to technological change and thrive in the 21st-century global economy.

### **Career-Focused**

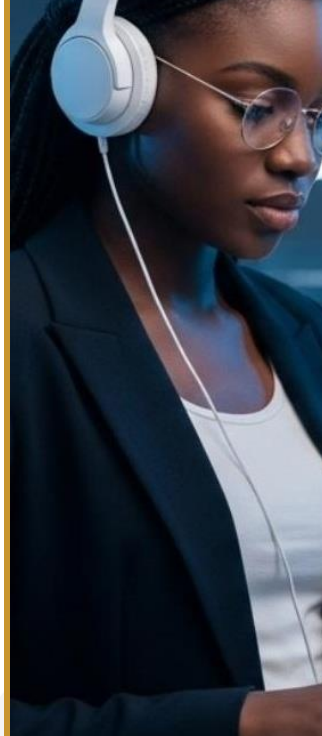
Prepared to apply their knowledge professionally and advance their careers with purpose and direction.

### **Skilled and Competent**

Possessing the essential skills and professional competencies for effective performance and ethical leadership.

### **Empowered Changemakers**

Ready to act as agents of positive change, equipped with the strategic tools and professional networks to lead and innovate.





# Your Four-Year Pathway

The program pathway for the B.Sc. Software Engineering moves from the sciences and computing foundations of 100 Level to the architecture, configuration management, and applied projects of 400 Level. Every course below is part of the NUC-aligned core.

## Credit units by level

|           |                        |    |
|-----------|------------------------|----|
| 100 Level | <div><div></div></div> | 23 |
| 200 Level | <div><div></div></div> | 28 |
| 300 Level | <div><div></div></div> | 21 |
| 400 Level | <div><div></div></div> | 15 |

Plus 60 units of A-Global electives (page 8)

| 100 | 100 Level                                         | 23 credit units | 200 | 200 Level                                             | 28 credit units |
|-----|---------------------------------------------------|-----------------|-----|-------------------------------------------------------|-----------------|
|     | <b>GST 111</b> Communication in English           | 2               |     | <b>MTH 201</b> Mathematical Methods I                 | 2               |
|     | <b>MTH 101</b> Elementary Mathematics I           | 2               |     | <b>COS 201</b> Computer Programming I                 | 3               |
|     | <b>PHY 101</b> General Physics I                  | 2               |     | <b>SEN 201</b> Introduction to Software Engineering   | 2               |
|     | <b>PHY 107</b> General Practical Physics I        | 1               |     | <b>CSC 203</b> Discrete Structures                    | 2               |
|     | <b>STA 111</b> Descriptive Statistics             | 3               |     | <b>IFT 211</b> Digital Logic Design                   | 2               |
|     | <b>COS 101</b> Introduction to Computing Sciences | 3               |     | <b>GST 212</b> Philosophy, Logic and Human Existence  | 2               |
|     | <b>GST 112</b> Nigerian Peoples & Culture         | 2               |     | <b>ENT 212</b> Entrepreneurship and Innovation        | 2               |
|     | <b>MTH 102</b> Elementary Mathematics II          | 2               |     | <b>MTH 202</b> Mathematical Methods II                | 2               |
|     | <b>PHY 102</b> General Physics II                 | 2               |     | <b>COS 202</b> Computer Programming II                | 3               |
|     | <b>PHY 108</b> General Practical Physics II       | 1               |     | <b>INS 204</b> System Analysis and Design             | 3               |
|     | <b>COS 102</b> Introduction to Problem Solving    | 3               |     | <b>IFT 212</b> Computer Architecture and Organization | 2               |
|     |                                                   |                 |     | <b>SEN 299</b> <b>SIWES I</b>                         | 3               |

● Work-integrated milestone (SIWES)

2 credit units



# 300 and 400 Level

Design, testing, architecture, and your final-year project

300

300 Level

21 credit units

○

SEN 301

Object-Oriented Analysis and Design

2

○

CSC 301

Data Structures

3

○

GST 312

Peace and Conflict Resolution

2

○

ENT 312

Venture Creation

2

○

SEN 304

Software Testing and Quality Assurance

2

○

SEN 306

Software Construction

2

○

SEN 322

Software Engineering Innovation and New Technology

2

○

CSC 308

Operating Systems

3

●

SEN 399

SIWES II

3

400

400 Level

15 credit units

○

COS 409

Research Methodology and Technical Report Writing

3

○

SEN 401

Software Configuration Management and Maintenance

2

●

SEN 497

Final Year Student's Project I

3

○

INS 401

Project Management

2

○

SEN 410

Software Architecture and Design

2

●

SEN 498

Final Year Student's Project II

3

## SIWES I and II

Two industrial work-experience placements (SEN 299 at 200 Level, SEN 399 at 300 Level) put you inside real organizations before you graduate.

## Final Year Project I and II

SEN 497 and SEN 498 at 400 Level carry your learning into a substantial, portfolio-ready project.

“

*There are two ways of constructing a software design: One way is to make it so simple that there are obviously no deficiencies, and the other way is to make it so complicated that there are no obvious deficiencies. The first method is far more difficult.*

C. A. R. Hoare, Turing Award lecture, 1980



# A-Global Electives

Twenty applied courses that put current tools in your hands: application development, UX/UI design, software architecture, testing, cloud, automation, and AI-powered development. Each elective carries 3 credit units and runs for 8 weeks.

**20** courses

**3** units each

**60** total units

**8** weeks each



## Academic Foundations

2

**AGC 200** Foundations of Academic Writing

**AGC 300** Information Technology Research Methods

## Enterprise Systems

5

**ATC 200** Information Systems Design Fundamentals

**ATC 401** Enterprise Resource Planning

**ATC 402** Modern Technology Integration

**ATC 403** Enterprise Applications with Open-Source Technologies

**ATC 404** IT Project Management

## Application Development and Design

6

**ATC 440** Fundamentals of Application Development

**ATC 442** Software Engineering Tools and Techniques

**SEN 410** Software Architecture and Design

**SEN 304** Software Testing

**ATC 441** UX/UI Design (Google)

**BIT 322** Human Computer Interaction

## Cloud, Automation and AI

5

**ATC 405** Cloud Infrastructure and Databases

**ATC 407** IT Automation with Python I

**ATC 408** IT Automation with Python II

**ATC 202** Foundations of AI Deployment (Claude AI)

**ATC 445** AI-Powered Software Development

## Capstone

2

**SEN 497** Software Engineering Capstone Project I

**SEN 498** Software Engineering Capstone Project II



# How You Will Learn

Education should fit your life, not the other way around. Whether you prefer the immersive experience of our Global Campus, the convenience of a local City Center, or the flexibility of online study, A-Global meets you where you are.

## The Hi-Flex learning model



### Global Campus

The immersive on-campus experience in Ibadan.



### City Center

The convenience of a local center close to home.



### Online

The flexibility of study that fits around your life.

## Three tiers of support, one team behind you



### Course Instructor

Your primary support official for each course: delivers content, leads discussions, gives assignment feedback, and evaluates your performance.



### Course Mentors

Credentialed, certified subject experts who add specialized guidance, answer in-depth questions, and facilitate peer-to-peer learning.



### Industry Faculty and Coaches

Working professionals who connect your learning to real-world practice, job-readiness mindsets, networks, and potential internship placements.



### Learner Support Team

Monitors your progress with meaningful weekly contact, in person or via phone, Teams, or Zoom, and escalates any concern for early intervention.

## Where to find us



### Global Campus, Ibadan

3 Oladosu Oladipo Close, Ashi Area, New Bodija, Ibadan, Oyo State



### Metro Campus, Abeokuta

1 Muideen Agboke Street, Opposite Foodco Supermarket, Ita-Iyalode, Abeokuta, Ogun State



### Ogbomoso Center

First Floor, Adekitan Building, Beside Ola Central Filling Station, High School Area, Ogbomoso, Oyo State



### Ondo Town Center

1 Homaj Street, Itanla, Akure Road, Ondo Town, Ondo State

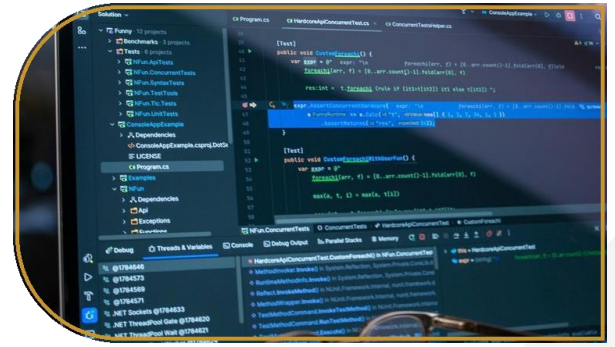
*“ Humans are allergic to change. They love to say, ‘We’ve always done it this way.’ I try to fight that.*

Grace Hopper, computer scientist and US Navy rear admiral, 1987



# Who You Will Become

Architects of the digital world: the engineers who design, build, test, and ship the software organizations run on.



## Enterprise Software Engineers

who build the large-scale, reliable, and secure systems that run major corporations.



## Full-Stack Developers

who create seamless web and mobile experiences from the database to the user interface.



## Cloud-Native Developers

who build and deploy scalable applications on platforms like AWS, Azure, and Google Cloud.



## System Architects

who can design the high-level blueprint for complex software applications.

## Where you will work

### Industries

Software as a Service (SaaS)

FinTech

Enterprise IT

Cloud Computing

### Certifications



Cisco DevNet Associate



AWS Certified Developer (Associate)



Oracle Certified Professional (Java)

### Career trajectory



*“ Adding manpower to a late software project makes it later. ”*

Fred Brooks, The Mythical Man-Month, 1975



# Your Path to Admission

Three entry routes, one destination. Choose the track that matches where you are starting from.



## Start *Begin. Build. Become.*

Fresh secondary school graduates, JUPEB, IJMB, and A-Levels.



## Accelerate *Start. Advance. Pivot.*

Direct Entry (NCE, ND, and NID) and university transfers. Graduate faster: finish in 24 to 36 months depending on experience and previously earned credits.



## Advance *Reposition. Reskill. Reinvent.*

For HND holders, third-class graduates, and chartered professionals transitioning into tech-driven fields. Admission by Direct Entry with Credit Transfer and Recognition of Prior Learning (RPL).

### Key facts

Duration  
**4 years**

Credential  
**B.Sc. Degree**

Delivery  
**Hybrid, Hi-Flex**

College  
**College of Technology**

### Entry requirements

- Five O'Level credits including English Language and Mathematics.
  - Subject credits relevant to the chosen program.
  - UTME or Direct Entry qualification where applicable.
  - A working device and a reliable internet connection.
- Students transitioning to a new program must provide their degree credentials.

### Tuition and fees

Regular tuition for the B.Sc. Software Engineering program is ₦2,100,000 per academic session. Under the 2026/2027 Merit Scholarship, eligible students receive up to 70% off, reducing tuition to ₦630,000 (Start & Accelerate), ₦840,000 (Advance I), or ₦1,050,000 (Advance II) per session.





# Ready to Build the Future?

Apply now and join a program designed for the next generation of software engineering leaders.

Apply now: [www.aouniversity.edu.ng](http://www.aouniversity.edu.ng)



Application QR code

*An idea is a blueprint. Ambition is the engine. A degree is the launchpad.*

A-Global

## Address

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+234 812 204 4014  
Call: 0700 700 3888

## Website

[www.aouniversity.edu.ng](http://www.aouniversity.edu.ng)

## Emails

|                   |                                                                              |              |                                                                                    |
|-------------------|------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------|
| General inquiries | <a href="mailto:info@aouniversity.edu.ng">info@aouniversity.edu.ng</a>       | New students | <a href="mailto:admissions@aouniversity.edu.ng">admissions@aouniversity.edu.ng</a> |
| Current students  | <a href="mailto:support@aouniversity.edu.ng">support@aouniversity.edu.ng</a> | Finance      | <a href="mailto:financing@aouniversity.edu.ng">financing@aouniversity.edu.ng</a>   |

## Connect

|                      |                                |                    |                                        |
|----------------------|--------------------------------|--------------------|----------------------------------------|
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Future Forward 