

# Adventist University of Central Africa

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# AUCA E-LEARNING SYSTEM SECURITY POLICY





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# **INTRODUCTION / General Information**

# **University Background**

The Adventist University of Central Africa (AUCA) was founded in 1978, but the official opening was held on October 15, 1984. The University was located at Mudende, former Mutura Commune, Gisenyi Prefecture, North-East of Rwanda. In 1994, just before the genocide against Tutsi, the AUCA had seven (7) faculties:

- Faculty of Business Administration (Accounting and Information Management);
- Faculty of Sciences (Mathematics and Physics, Biology and Chemistry,
   Human Biology and Public Health);

- Faculty of Education (Educational Psychology);
- Faculty of Technology;
- Faculty of Agriculture;
- Faculty of Languages (French and English);
- Faculty of Theology;

Following the 1994 genocide against the Tutsi, AUCA temporarily suspended its activities until 7 May 1996, during which time the AUCA reopened a transition Campus at Gishushu, in Kigali City. From that time the University has run only four faculties:

- Faculty of Business Administration, with four departments: Accounting,
   Management, Marketing and Finance;
- Faculty of Science in Information Technology, with three departments:
   Information Management, Networking & Communication Systems, and
   Software Engineering;
- Faculty of Education, with six departments: Educational Psychology,
   English Language and Literature, Accounting, Information Technology,
   Mathematics and Geography;
- Faculty of Theology

Currently, the university operates on a new campus at Masoro, which is located in Gasabo District, Kigali City. The University is committed to achieve its complete development and expansion.

# **AUCA Philosophy**

The Adventist University of Central Africa operates on the basis of the Seventh-day Adventist worldview, which holds that God is the Creator and Sustainer of the universe and the source of true knowledge. The entrance of sin caused man's alienation from God, therefore the restoration of the relation between man and his God is the main aim of the Christian Education that leads students to discover and understand the truth through critical thinking.

#### **AUCA Mission**

The Adventist University of Central Africa is committed to providing a Christ-centered quality education founded on a holistic approach that prepares people for the service of this life and the life to come.

#### **AUCA Vision**

The Adventist University of Central Africa (AUCA) is to be a centre of excellence in undergraduate and postgraduate programmes. Quality shall be the hallmark of all its undertakings including research and service delivery to its students, faculty, staff and community at large.

#### **AUCA Beliefs and Values**

AUCA is a Seventh-day Adventist institution of higher learning that nurtures the mental, spiritual, social and physical capacities of its personnel and students. The values of the University are rooted in the Holy Scripture and should be seen in the daily activities of the university administrators, workers, and students.

Through a process of discernment based on dialogue and reflection, the following AUCA core beliefs and values have been designated:

# **Faith**

AUCA is a faith-based institution of higher learning. The faith nurtured in the institution is rooted in the teachings of Jesus Christ and in the 28 beliefs of the Seventh-day Adventist Church. While we respect the religious traditions and individual beliefs of our personnel and students, the university administration and faculties are expected to integrate a biblical, Seventh-day Adventist faith into learning activities of our students.

# **Integrity**

Concerned with the good of the community in this life and the life to come AUCA commits itself to honesty in all relations with students, faculty, staff and administration. Through integrity AUCA community maintains the trust of the surrounding community and of public and governmental agencies.

#### Love

Informed by the example of Jesus Christ, and by the fundamental beliefs of the Seventh-day Adventist Church AUCA community demonstrates a spirit of unity and connectedness with one another through expression, courtesy, hospitality, shared values and having communication irrespective of ethnic, gender, or other differences. AUCA community extends this value of love by reaching out to neighbors and to members of the larger civil and ecclesial communities.

# Respect

AUCA community values and respects the contribution of each member of everyone at the university and the stakeholders to the advancement of the mission of AUCA. Team-spirit is encouraged through supporting one another as colleagues working together for the good of the whole institution.

#### Compassion

Inspired by the example of Jesus Christ we open our hearts to those among us in physical, spiritual and mental need. Besides, AUCA community consciously reaches out beyond the boundaries of AUCA to serve others in need with compassion and mercy.

#### **Fairness and Justice**

Recognizing the dignity of all persons (students, staff, teachers and administrators) AUCA community seeks to avoid any acts of injustice toward others and address instances of injustice within and outside the university boundaries from a stance of informed advocacy. We hold ourselves accountable to one another and endeavor to practice responsible stewardship of the resources available to us.

#### **Excellence**

As a faith-based institution of higher learning AUCA community seeks to combine faith with reason in the pursuit of academic excellence. AUCA Senate and Administration call upon all members of its community to individually and professionally excel their respective duties.

# **AUCA** goals

As an Adventist University, its principal goals are as follows:

- To promote the development of the mental, spiritual capacities and social strengths of an individual until his highest potential is reached;
- Based on biblical principles the university seeks to help students become useful members
  of the society not only endowed with intellectual skills, but well-developed character. The
  university focuses its goals and its objectives on the principles of the Bible;
- To inculcate into the students the desire for a life style based on a balanced natural food, principles of hygiene and physical exercises; and
- To help students become useful members of the community endowed not only with intellectual skills, but also with the most well-balanced character of a good citizen of this world and the world to come.

# **Objectives**

The main objectives of AUCA is to promote true education upheld by the SDA Church among individuals through the holistic approach of developing mental, spiritual, physical, and social strengths of the individual until one's highest potential is reached. This can be achieved through:

- 1. Developing its students to become useful members of the society, empowered not only with intellectual skills but also with a well-developed moral character.
- 2. Focusing its goals and its objectives on the principles of the Bible preparing students to become good citizens of this world and of the world to come.
- 3. Inculcating into its students the desire for a life style of a balanced-Bible based diet, principles of hygiene and physical exercises.
- 4. Motivating students to appreciate art, music, and diversity within the surrounding and develop their social maturity which will enable them to become peace makers their local communities, countries, and regions.
- 5. Framing individuals to become better researchers with independent critical thinking and judgment so that they become developers of knowledge.
- Providing a conducive learning environment that gears the students to acquire the knowledge, skills, competencies, and attitudes needed in the labor market nationally and internationally.
- 7. Instilling in students the appreciation of the dignity of work as a blessing for themselves, the service of AUCA, and the community.

#### **AUCA Accreditation**

The university operates under the charter from the Ministry of Education of the Government of Rwanda, through Higher Education Council (HEC) and as such it is empowered to offer its programmes and confer appropriate degrees. The institution has reciprocal arrangements to recognize its degrees and diplomas from other accredited universities both within the country and

elsewhere. Denominationally, the university holds accreditation from Adventist Accrediting Association (AAA) of the Seventh-day Adventist Schools, and Universities worldwide.

# **E-Learning**

E-learning is the term used to describe the use of the web and other Internet technologies in terms of enhancing the teaching and learning experience. It shares similar characteristics of many other e-services, such e-commerce, e-banking and e-government. The e-services users' behaviors are different according to their roles and needs. E-learning users focus on how to benefit from e-learning concerning teaching and learning purposes. The users may need to spend longer periods of time when undertaking e-learning compared to other e- services due to interactive content that is found there which learners have to go through in order to accomplish certain class activities.

#### Introduction

During this era, we are living in, there is a huge rise of remote learning that was triggered by the pandemic that has hit the world. Even though e-learning was always there before the pandemic, but it was not taken as a sustainable solution hence if it is used well students will earn more knowledge and skills through various means of education. Online learning coupled together with face to face learning makes it possible to have a strong blended learning system which in return will be a foundation of new venture in education.

# **Security Triad**

Our e-learning platform must comply with security triad by fulfilling CIA- Confidentiality, Integrity and availability of the system.

(1) Availability: In e-learning, availability is the assurance that the e-learning environment is accessible by authorized users, whenever it is needed. Availability can be divided into two: Denial

of Service attack (DoS – an attack that stop access to authorized users of a website, so that the site is forced to offer a reduced level of service or, in some cases, ceases operation completely) and loss of data processing capabilities. The e-learning users are dependent on the information on the Internet; therefore, the availability of materials and information to be accessed at any point in time and at any location is crucial.

- (2) Integrity of Information: This is the protection of data from unauthorized changes (i.e. only authorized users or processes are allowed to alter contents and no changes can be made illegally). Integrity depends on access controls; therefore, it is important to positively and uniquely identify all persons who attempt access. Integrity can be compromised by hackers, masqueraders, unauthorised user activity, unprotected downloaded files, LANs, and unauthorized programs (e.g., Trojan horses and viruses), simply because each of these threats can lead to unauthorized changes to data or programs.
- (3) Confidentiality: This is the protection of information in the system so that unauthorized persons cannot gain access. Identification and Authentication: Identification tries to identify legitimate users to whom access has been granted while Authentication tries to verify that the user is the same as whom he claims

All the above information security triad has to be adhered with when it comes to AUCA eLearning platform by making sure that users accessing our system should be known and be monitored against all activities they carry out online. This gives the administration the assurance of the safety of the system and quality of content shared in the LMS.

#### **Authentication and Authorization**

All users accessing AUCA e-learning platform should be authenticated and granted access accordingly. Users should be registered at once by online team and they shall reset password upon login into the system.

#### **System access and monitoring**

All students access AUCA eLearning platform should be keenly identified by asking them to turn on camera's for identification purposes. Safe exam browser platform should be enabled on each client in order to lock screen whenever the assessment in ongoing.

#### **System Audit**

The online team from time to time they should conduct security audit and inspection to find out if only legitimate users are the only ones that usually login into the system by doing deep user and content inspection to figure out if there was anything compromised.

### System hardening and customization

The system should be customized to avoid any user free registration without Admin approval. Customization should be done in such a way that all users should be granted permissions required to achieve any task. There should be system access request form such that there will be filling activity of all the users for future reference.

#### **Backup and restoration**

The e-learning system should be backed up on a monthly basis and the backup shall be kept in a safe place since it may be required for restoration in case there is system crash. A test bed or a redundant system should be in place in order to carry out some tests and restart the backed up files to make sure that they are in a good condition.

# **Information Security Management in E-Learning**

Information security technology, hardware and software have been used in order to secure the e-learning environment where it is currently hosted. Security control for system access and management shall be in place to avoid system security compromise in any form. The hosting company shall sign an NDA and SLA to indicate that the system is secure and make sure to abide with it. AUCA Online team on the other hand shall be responsible to make sure that all required security best practices are followed by both teaching staff and learners. The overall goal is to make sure that our eLearning is safe and secure when it comes to access because a system whereby security cannot be managed is not secure, no matter how excellent the controls suggested. Furthermore, the users (lecturer and students) will also benefit with the secured e-learning environment.

